DOCUMENT RESUME

ED 461 084 CG 031 520

AUTHOR	Thomas, Alex, Ed.; Grimes, Jeff, Ed.
TITLE	Best Practices in School Psychology IV. Volumes 1 [and] 2.
INSTITUTION	National Association of School Psychologists, Bethesda, MD.
ISBN	ISBN-0-932955-85-1
PUB DATE	2002-00-00
NOTE	1829p.
AVAILABLE FROM	National Association of School Psychologists, 4340 East West Highway, Suite 402, Bethesda, MD 20814. Tel: 301-657-0270; Fax: 301-657-0275; Web site: http://www.naspweb.org.
PUB TYPE	Books (010) -- Collected Works - General (020) -- Guides - Non-Classroom (055)
EDRS PRICE	EDRS Price MF16 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Academic Achievement; Accountability; Counselor Training; *Delivery Systems; Elementary Secondary Education; Ethics; Evaluation; Intervention; Prevention; *Professional Services; Professional Training; *School Psychologists; *School Psychology; Supervision; Theory Practice Relationship

ABSTRACT

The emphasis of school psychology on prevention, early intervention, assessment, collaboration, and problem solving requires counselors to have a tremendous range of evidence-based knowledge. This publication, divided into two volumes, is designed to provide a comprehensive reference for school psychologists on contemporary research and perspectives related to quality professional services. The information emphasizes a problem-solving approach to professional practice to improve student performance and enhance educational success in a demonstrable manner. The two volumes are divided into four parts with chapters clustered around the concepts of professional focus, improving student performance, assessment domains and special populations, and appendixes with practical reference materials. The chapters in Part 1 are related to the enhancement of professional services and the topics range from revisiting the shifting paradigm in school psychology to the standard topics on ethics, supervision, and accountability. Part 2 contains topics on interventions to improve student academic and behavioral performance. Part 3 considers assessment domains and special populations. Part 4 provides a set of appendices for reference which include standards, a listing of training programs across the country, and a full listing of National Association of School Psychologists position statements, training standards, and ethics. (Contains 48 tables, 101 figures, 4 appendixes, and over 900 references.) (JDM)

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Best Practices in School Psychology IV

Volumes 1 [and] 2

Alex Thomas and Jeff Grimes, Editors

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Edited by
Alex Thomas and Jeff Grimes

Volume 1

NASP

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Best Practices in School Psychology IV

Volume 1

Best Practices in School Psychology IV

Edited by

Alex Thomas
Miami University
Oxford, Ohio

Jeff Grimes
Heartland Area Education Agency
Iowa

The National Association of School Psychologists
Bethesda, MD

From the NASP Publications Board Operations Manual
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NASP Publications
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Bethesda, MD 20814
(301) 657-0270
(301) 657-0275, fax
e-mail: *publications@naspweb.org*
www.nasponline.org

ISBN 0-932955-85-1

Printed in the United States of America

First Printing, February 2002

10 9 8 7 6 5 4 3 2 1

Preface

Best Practices in School Psychology IV, like the three preceding editions published by the National Association of School Psychologists (NASP), is designed to provide a comprehensive reference for school psychologists with contemporary research and perspectives related to quality professional services. The fourth edition maintains a theme that began in the third edition and is reflected in most of the chapters—emphasizing a problem-solving approach to professional practice.

A problem-solving orientation is distinguished by its purpose: to improve student performance and enhance educational success in a demonstrable manner. Problem solving is a systematic process that includes the assessment of children and their environments, identification of needs, development and implementation of supports to meet needs, and the monitoring and evaluation of outcomes. This orientation permits any theoretical approach in the design of interventions, but uses improved student performance and educational functioning as a criterion for measuring success. This commitment to improving students' performance and well-being is in harmony with NASP's mission of serving the mental health and educational interest of all children and youth.

As an aid to the reader the book is divided into four parts with chapters clustered around identified concepts.

Part I establishes a professional focus. Chapters in this section are related to enhancing professional services with topics ranging from revisiting the shifting paradigm in school psychology to mainstay themes within a profession such as ethics, supervision, accountability, legal issues, professional development, and maintaining professional effectiveness. These chapters present content that potentially influences all other professional services.

Part II presents a focus on improving student performance. Such a focus relies on understanding the design, implementation, and evaluation of interventions, in addition to mastery of a variety of topics associated with improving student academic and behavioral performance.

Part III considers assessment domains and special populations. Assessment is viewed very broadly, and the included chapters deal more conceptually with the issues rather than providing a specific guideline for action.

Part IV provides a set of appendices that will be useful professional reference including standards, a listing of training programs across the country, as well as a full listing of NASP position statements, training standards, and ethics.

Also as an aid to the reader, most chapters follow a common framework of headings. Each chapter, in addition to a list of citations from the professional literature, includes an annotated bibliography with up to five additional readings to provide more detail for those who wish an in-depth study.

We hope this organizational structure and the content of this publication will assist the profession in advancing the quality of services to educational systems, students, parents, and families. This is the intent and spirit of this publication.

The *Best Practices* series has been developed as an aid to the practitioner school psychologist who daily faces a multitude of situations and challenges. It is meant as a resource to provide a framework to deal with these situations and challenges within the context of our nation's schools. It is now, we understand, also used in many school psychology training programs to assist in the education of future professionals, though it is important to again reiterate that each chapter was written with the informed practitioner as the audience.

It is through our individual efforts that the profession collectively advances, and we hope this resource will be useful in that journey.

Acknowledgments

There have been numerous people involved in conceptualizing, planning, processing, and publishing *Best Practices in School Psychology IV*, and we would like to take this opportunity to acknowledge their invaluable contributions.

First, effusive thanks and acknowledgements go to the cadre of reviewers who read draft chapters, provided valued feedback to authors, and shared their perspectives of the varied topics. An earnest attempt was made to have each chapter reviewed by at least three practitioners and, in many cases, one university trainer. Once reviews (reviewers were provided a format for feedback) were received they were forwarded to the author along with copies of reviewer marginal notations and editor comments. It was a time-consuming process for the reviewers, and many authors' final manuscript substantially benefited from reviewer efforts. Reviewers who substantially contributed to this book include:

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We also need to thank our *Best Practices in School Psychology IV* Advisory Panel who was available to consult on thorny issues, political minefields, professional orientation, and any other challenges that could have potentially delayed the quality and timeliness of this publication. The Advisory Panel included Bruce Bracken, Jeff Braden, Andrea Canter, Deborah Crockett, Frank Gresham, Patti Harrison, Ruben Lopez, Leslie Paige, Dan Reschly, Susan Sheridan, and Cathy Telzrow. There were occasions we would create problems just for an excuse to communicate with such a talented and professionally active group.

With more than 100 chapters in some stage of preparation (author contact, submission of first draft, identification of reviewers, draft sent to four reviewers, tracking and assembling reviews, providing initial feedback to author, receiving final or second draft from author, copyediting the final draft, returning copyedited chapter to author for approval and/or changes, receiving author feedback on copyedited version, setting chapter in publishable chapter format, and providing publishable chapter format to author for final approval) you can imagine the considerable logistical challenge to track the stage of each chapter. Over the more than three-year process of completing this project some outstanding Miami University graduate students in school psychology have been of invaluable assistance. The manner in which they good humouredly and most competently juggled their studies, their field placements, and their *Best Practices* responsibilities certainly bodes well for this profession's future.

Mary Shinn was primarily responsible for setting up the tracking database and assiduously sending reminder emails and telephone messages to tardy reviewers and authors. Her grasp of the overall project made timely completion possible, and her two years of graduate coursework fortunately coincided with the beginning of this project (and her previous two years of Peace Corps volunteering and four years of New York city teaching did not hinder her, either). A more quietly competent person would be hard to find. Internship year beckoned for Mary, and it was our good fortune to have her work completed by an equally competent Mandy Grantz. Mandy effectively brought all the loose ends together to assure timely completion and anticipated all varieties of potential problems with a gifted prescience. Over the considerable development period of this book other school psychology students were involved in some aspects of communication or production. We thank them for their efforts. They include Lora LeMay, Kristine Joaquin, and Leslie Toleski.

Our appreciation is extended to the NASP Publications Board and particularly to the Board's liaison to this project, Leslie Paige. As usual, one can always rely on the members of the staff at the National Association of School Psychologists. Marilyn Brazier cleared potential bureaucratic barriers to ensure easy traversing, Rosemary O'Donnell continued to provide the "other duties as assigned" ombudsman role so common in school psychology job descriptions, and Susan Gorin was terrifically facilitative by providing continuing support and easy availability of a "thumbs up" when needed.

Linda Morgan from the NASP staff deserves credit for arranging the details associated with the production of this book and for finding the excellent professionals who did the copyediting, were responsible for the publishing, and developed the cover.

The copyeditor, Mike Schwartz, was really more than a copyeditor. He also contributed substantive comments and perspectives as well as the expected assurances that references were cited properly, tenses agreed, and tables aligned. He was a real talent who added continuity and cohesiveness to this project. Our frequent e-mails and phone communications will be missed. When Mike completed his copyediting Carol Levie most ably assembled the conglomeration of chapters into a coherent desktop form and creatively improved tables and lists, doing digital magic. We thank Mike and Carol.

Most if not all of the authors receive kudos for good-naturedly adapting to the conventions of an entirely electronically assembled book. All chapters were copyedited and processed electronically. It was the first such experience for us as editors and most of the authors who have grown up with paper copies and the arcane copyediting marks scribbled on manuscripts. We understood the challenges of adjusting to this contemporary mode of doing business, and the challenge of adaptation was made much easier by the flexibility of the authors.

Any errors, typos, conceptual gaffes, missed opportunities, or other glitches cannot be attributed to those who have just been acknowledged.

Alex Thomas
Jeff Grimes

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I.

Professional Leadership Issues and Services

1

Paradigm Shift: The Past is Not the Future

Daniel J. Reschly
Vanderbilt University
James E. Ysseldyke
University of Minnesota

OVERVIEW

In this fourth edition of one of the most successful volumes in school psychology, the shifting paradigm toward services guided by problem solving and evaluated by the achievement of positive outcomes is increasingly apparent. In this chapter, we describe and contrast different paradigms for the design and delivery of school psychological services, analyze problems in the traditional delivery system, and review major policy and reform statements. The chapter concludes with a discussion of the knowledge base, underlying principles, and strategies that form the basis for psychological services that emphasize problem solving, functional assessment, and educational accountability.

The paradigm shift theme appeared in an earlier chapter we authored for *Best Practices in School Psychology* (3^{rd} ed.). Today, years later, we are even more certain of the paradigm shift than before based on (a) successful implementation of system reform in several states, (b) research results showing the irrelevance of IQ to the identification of students with high incidence disabilities, disabilities that account for 85–90% of all students with disabilities, (c) increasing knowledge of effective academic and social/behavioral interventions, (d) recommendations of authoritative reports such as the National Academy of Science's *Report on Minority Over Representation in Special Education*, and (e) increasing governmental support for systems that feature noncategorical eligibility and functional assessment.

SCHOOL PSYCHOLOGY AND CRONBACH'S TWO DISCIPLINES

Philosophical foundations for service delivery systems are important guides to how problems are conceptualized, assessed, and treated. Two contrasting philosophical foundations are the basis of the traditional delivery system and the alternative delivery systems emphasized in the school psychology literature since the mid-1980s (Reschly, 1988a, b). Correlational and experimental approaches to scientific psychology correspond closely to differences between current delivery system models (Cronbach, 1957). Cronbach described the two disciplines, correlational and experimental, as differing in (a) philosophical assumptions, (b) research methodology, (c) key variables and causal inferences, and (d) methods of promoting human welfare.

Correlational Discipline

The correlational discipline emphasizes assessment of the natural variations among people in cognitive, physical, and social-emotional domains. These variations are then related to actual performance in academic or employment settings. If there are significant relationships (correlations) between these natural variations and performance, then increased efficiency in the use of resources and enhanced overall performance can be produced by differential selection or placement. The correlational discipline attempts to advance human welfare by selecting the best-qualified persons for different careers, training programs, or instructional procedures. Cronbach suggested that the correlational tradition was more consistent with political conservatism in that the individual differences are typically seen as relatively immutable to change and the main outcome is to fit persons to existing programs.

Experimental Discipline

In contrast, the experimental discipline was seen as more liberal politically because the fundamental aim is to create higher levels of performance through, first, discovering the best interventions and then, second, disseminating and implementing the best interventions. Different treatments or interventions are contrasted carefully so that causal statements can be made about which had the highest average effects for groups of participants or, in single subject designs, for individuals. Careful control of experimental conditions was extremely important so that valid comparisons could be made between experimental conditions (i.e., treatments).

The fundamental differences between the two disciplines become more apparent in considering what each did with individual differences. The experimentalist attempted to create variations among persons who received different treatments and to minimize variations among persons who received the same treatments. The variation among persons receiving the same treatment was error, something that had to be controlled to the greatest extent possible. Experiments are rarely entirely successful. Some degree of variation among persons receiving the same treatment is virtually inevitable.

The fundamental phenomena studied in the correlation discipline are the more or less "natural" variations among persons, considered by the experimentalist as error variance. It is this natural variation that makes differential prediction possible. Non-significant or attenuated prediction accuracy results from the absence of variations among persons or artificially reduced variations. Interestingly, variations among persons or individual differences were fundamental to both disciplines; however, the predictor variables in the correlation tradition contributed to the error terms in the experimental discipline. One science attempted to produce differences while the other attempted to predict performance from existing individual differences and select more appropriate placements. In many ways the traditional and modern trends in school psychology parallel the approaches in the two disciplines.

Aptitude by Treatment Interactions

In the seminal 1957 article Cronbach suggested a merger of the two disciplines would produce maximum benefits. "For any potential problem, there is some best group of treatments to use and some best allocation of persons to treatments" (p. 680). The Aptitude by Treatment Interactions (ATI) approach involved the study of (a) differences among treatments, (b) aptitude differences among persons, *and* (c) the interaction of aptitudes and treatments. Based on the interactions, individuals would be assigned to the treatments that would produce the best results. The educational application suggested by Cronbach, greater emphasis on individual prescriptions, was the basis for much of school psychology over the past two decades, "... we should *design* treatments, not to fit the average person, but to fit groups of students with particular aptitude patterns.... We should seek out the aptitudes which correspond to (interact with) modifiable aspects of the treatment" (Cronbach, 1957, p. 681).

ATI is one of the most attractive ideas in all of basic and applied psychology (Arter & Jenkins, 1977, 1979; Ysseldyke, 1973). It is an idea that "should" work in the laboratory and in practice. The idea of matching treatment to naturally occurring characteristics of the person makes inherently good sense; clearly, it is consistent with our humanistic commitments of individualizing instruction and psychological treatments in order to maximize opportunities. ATI is especially attractive in school psychology where most of the work traditionally has been with individual children referred for learning and behavior problems. Unfortunately, what "should" work, what is inherently appealing, is not always a sound basis for practice. Such is the case with the efforts to use ATI as the foundation for applied psychology.

ATI Failure and Short-Run Empiricism

In less than two decades, Cronbach's frustration with ATI as a basis for applied psychology was palpable in another *American Psychologist* article, "Once we attend to interactions, we enter a hall of mirrors that extends to infinity" (Cronbach, 1975, p. 119). In the ensuing years between 1957 and 1975, Cronbach and colleagues conducted many studies in which attempts were made to identify interactions of aptitudes and treatments. Unfortunately, the hypothesized interactions often did not occur, were extremely weak when they did appear, and often were entangled in intractable and hopelessly complex higher order interactions that were virtually impossible to study in laboratory settings, let alone use in practical situations. Furthermore, potent interaction effects, when they did exist, were for prior achievement or skill levels within the domain(s) of behavior that was/were the dependent variable(s) in the ATI experiments. Indeed, level of prior knowledge or skills is an important variable in subsequent learning or performance; however, the effect of prior knowledge was not the kind of aptitude envisioned in Cronbach's grand design or in the school psychology applications of ATI.

In the 1975 article Cronbach abandoned ATI as the basis for applied psychology. The strategy he suggested to replace ATI was remarkably similar to the current emphases on accountability and problem solving strategies (see later discussion). In place of ATI, Cronbach suggested context specific evaluation and short-run empiricism, "One monitors responses to the treatment and adjusts it" (p. 126). Two realistic goals were proposed by Cronbach for applied psychology: "One reasonable aspiration is to assess local events accurately, to improve short-run control. The other reasonable aspiration is to develop explanatory concepts, concepts that will help people use their heads" (1975, p. 126). The use of short-run empiricism (problem solving), and the selection of behavior change or instructional design principles from the available literature (see later discussion of experimentally supported interventions), is the contemporary application of Cronbach's suggestions for moving beyond the rigidity and insufficiency of the two disciplines of scientific psychology.

School Psychology Applications

Parallels to Cronbach's two disciplines in traditional and modern school psychology are easily identified. Although experimental trends were apparent in the earliest roots of school psychology (Sandoval, 1993), most of school psychology's history has been devoted to practice that is consistent with the correlational and ATI bases for practice (Fagan & Wise, 2000; Reschly, 1988a, b, 2000; Christenson & Ysseldyke, 1989). The increasingly frequent use of single subject designs, Curriculum-Based Measurement with formative evaluation, and functional behavioral analysis represent the clearest applications of the experimental discipline in contemporary school psychology.

The correlational parallel occurs with traditional placement services in which referred children are assessed to determine if they meet the criteria for classification as disabled. Children with different score patterns on measures of current intellectual functioning and academic achievement, are often classified into different disability categories and placed in different educational programs for part or all of their school day. The differential placement is seen as necessary to allow children to benefit educationally because the general education program is inappropriate to their naturally occurring aptitudes (general intelligence and achievement), a classic application of the correlational discipline (Cronbach, 1957). The earliest roots of school psychology (Fagan, 1992; Fagan & Wise, 2000) and a substantial proportion of current practice involve assessment of children's aptitudes and achievement as the basis for placement decisions. This application of the correlational science is valid to the degree that the placements are different and beneficial for individuals, groups, or systems, an issue to which we will return in a subsequent section.

Change in special education and school psychology is needed. The old models based on the correlational science and identification of deficits has not produced sufficient results. Better results for all students are needed. We believe those better results can be achieved through adoption of an experimental science, dedicated to building competencies rather than focusing on deficits. First, we discuss the many reasons for changing the current system.

UNRESOLVED CHALLENGES IN CURRENT PRACTICE

A number of intractable problems exist in the current system that have not been resolved, and are not likely to be resolved with significant system changes. In this section we discuss those problems, followed by a section that discusses the outlines of a paradigm shift.

Nature of Current Practice

Survey studies of the practice of school psychology yield consistent results (Curtis, Hunley, Walker, & Baker, 1999; Hosp & Reschly, in press; Reschly, 2000; Reschly & Wilson, 1995; Smith, 1984). School psychologists devote about two thirds of their time to activities related to special education classification and placement, with slightly over half of the time devoted to individual assessment activities, usually with standardized measures of ability and achievement. These surveys also indicate that current practitioners prefer to spend more time in direct and indirect activities related to interventions such as individual counseling and problem-solving consultation. The value of the current roles and time allocations depends heavily on the benefits to students associated with classification as disabled and placement in special education programs. The key issue is, "Do special education categorical diagnoses such as emotional disturbance (ED), learning disability (LD), mild mental retardation (MMR) lead to category-specific treatments, and are those treatments differentially effective depending on the student's diagnosis?" The answer seems to be negative. Moreover, current practice is deficit-focused (i.e., dedicated to finding deficiencies in children's capabilities) rather than the enhancement of competencies. The current standards-based reform and accountability themes are highly influential in moving general education toward a competency enhancement focus, an influence that will be increasingly apparent in special education now and in the future.

Educational Accountability and Effectiveness of Special Education

The single greatest challenge in current practice is demonstration that students with disabilities and those who are at risk actually benefit from the educational programs, services, and interventions they receive. In the recent past, efforts to account for benefit usually involved attempts to demonstrate that *special education* was "effective." These efforts usually were combined with attempts to show that students benefited from being classified as mildly disabled and placed in special education. Multiple debates resulted from such effort because "effectiveness" was a function of the dual effectiveness of categorization practices and treatment practices. So, for example, researchers debated the effectiveness of classification and categorical practices (Ysseldyke & Marston, 1999), the cost/benefit of providing special education services (Chambers, Parrish, Lieberman, & Wolman, 1998), cost/benefit of prevention (Lee, Schnur, & Brooks-Gunn, 1988), and the effectiveness of instructional interventions based on aptitude-treatment interactions (Kavale & Forness, 1999), as well as in general (Ysseldyke & Marston, 1990). The reliability and validity of classification and categorical practices repeatedly has been challenged (Ysseldyke, Algozzine, & Thurlow, 2000; Ysseldyke & Marston, 1999). And, researchers indicate that assignment of differential treatment based on student ability, aptitude (ATI), or categorical condition has not produced especially promising outcomes.

More recently, researchers are examining the extent to which *education* works for students with disabilities. Investigations of treatment effects are considered independent of setting. While the shift from asking, "Does special education work for students with disabilities?" to asking "To what extent does education work for students with disabilities?" has been an important conceptual shift, and one that recognizes that students with disabilities are educated for the most part in general education settings, the treatment effects question still has not been answered.

So, what is the big deal. Why is this a problem? School psychologists spend most of their time classifying students, declaring them eligible for special education, and assigning treatments or interventions. In an era of accountability, school personnel and the general public want to know whether that practice is beneficial, and whether students are better off. Consider the following challenges we face:

1. Experimental studies of the effects of special education placements and settings cannot be conducted because students cannot be randomly assigned to different treatment conditions. Thus, researchers cannot conduct true experiments. They cannot examine the differential effect of general and special education for the same students, and they cannot examine the differential effect of special education for students who are and are not disabled. Efficacy studies must focus on individual treatment outcomes.

2. Chambers et al. (1998) report that "There are no comprehensive and accurate data sources that indicate what public schools in the U.S. are spending on special education services" (p. 2), and that "There are no current, uniform data sources that track expenditures for special education services at the federal and state level" (p.4). Current estimates suggest that, on average, the additional costs of special education are about 2.3 times the costs of regular education (Chambers, 1999). Special education is very expensive. Thus, it is important to ascertain the cost/benefit of special education services, and to make sure that the benefits are substantial.

3. Students with disabilities regularly and systematically have been excluded from large-scale state and district assessments. So, there are few data on their performance over time. For the most part we do not know, in the aggregate, how they are performing and the extent to which they are making progress. Such data are only available at the level of the individual student.

4. Very recently there have been significant increases in the participation of students with disabilities in assessment and accountability systems. When performance over time is tracked, the gap in performance of students in general and special education gets wider every year, with a continual decline in the performance of the group of students assigned to special education. Yet, as Bielinski and Ysseldyke (2001) showed, the gap in performance is confounded by annual reclassification of students from general to special education, reclassification from special to general education, and differential dropout.

5. Evidence for the effectiveness of treatments or interventions is best demonstrated at the level of the individual using a direct, frequent measurement approach (Reschly, Tilley & Grimes, 1999; Fuchs & Deno, 1991).

Given the failure of previous attempts to demonstrate the effectiveness of special education and of improved aggregate outcomes for students with disabilities, evidence of effectiveness is best demonstrated at the level of the individual, and through use of a problem-solving methodology with direct and frequent measurement.

Search for Pathology and Stigmatizing Labels

The search for pathology has dominated school psychology practice and special education eligibility and treatment to such an extent that few practitioners or researchers even consider alternatives (Ysseldyke, 2001). The search for pathology dominates eligibility evaluations and confers an overall, often implicit, obsession with deficits that deflects attention from effective treatment and the explicit pursuit of goals related to adult social roles. It is critical that assessment and treatment move away from the deficit orientation toward competence enhancement and capacity building at the individual and systems levels. Greater emphasis on enhancing competencies will be furthered by eliminating stigmatizing special education categorical labels, characterized accurately by Hobbs (1975) as:

> They are imprecise: They say too little, and they say too much. They suggest only vaguely the kind of help a child may need, and they tend to describe conditions in negative terms. Generally, negative labels affect the child's self-concept in a negative way, and probably do more harm than good (p. 102).

Alternatives to the current categorical special education eligibility system have been proposed and implemented (Reschly & Tilly, 1999; Tilly, Reschly, & Grimes, 1999). A non-categorical system works best with the traditional high incidence disabilities such as LD, MMR, and ED. Federal law now explicitly permits non-categorical approaches (see 34 C.F.R. 300.125). Non-categorical approaches facilitate placing more emphasis on gathering assessment information related to designing interventions that enhance competencies.

The Dilemma of Learning Disabilities

Nearly every system reform discussion focuses more attention on LD than any other category. There are many reasons for this emphasis; however, the primary reason is the dominance of LD in special education. Although there are 13 disability categories recognized in Individuals with Disabilities Education Act (IDEA, 1997, 1999), slightly over half of all students with disabilities are classified as LD.

LD is a dilemma for many reasons. First, the history of the LD field is replete with sharp disagreements over theory, research, and practice. The discussions of the essence of learning disabilities are reminiscent of the famous U.S. Supreme Court Justice's comment on pornography, "I know it when I see it." In fact, professionals have grave difficulty in identifying LD consistently across referred students, across different school districts, and across different states (Epps, Ysseldyke, & McGue, 1984; Gottlieb, Alter, & Gottlieb, 1999; Ysseldyke et al., 1983). Moreover, the prevalence of LD varies by a factor of three across the states (i.e., the highest prevalence state (Rhode Island) has three times as many students classified as LD as the lowest prevalence state (Georgia) (U.S. Department of Education (USDE), 1998).

Disagreements over intervention models also complicate the discussion of effective programs for students with LD. The process deficit model was dominant when LD was introduced in the 1960s as a comprehensive term referring to a variety of disorders previously called minimal brain dysfunction, dyslexia, perceptually impaired, and so on. The process deficit model was unsuccessful (Hammill & Larson, 1974; Kavale & Forness, 1999), although Naglieri and Das (1997a, b) are attempting to revive the notion that training cognitive processes such as planning can improve educational achievement. The rather bold claims made by these authors (Naglieri & Johnson, 2000) await independent replication.

The ATI model of LD intervention was conceptually similar to the process deficit model. Both emphasized deficit cognitive processes; however, the ATI model emphasized avoiding weak or deficit processes in the choice of teaching methodology, assuming that using intact processes would produce better results. The ATI model involving matching strengths and avoiding deficits is very popular as noted previously; however, there is no evidence that it works regardless of whether the processes are conceptualized as culturally specific learning styles (Frisby, 1993; Irvine & York, 1995), neurologically intact functions, cognitive styles such as simultaneous versus successive, modalities such as visual and auditory, and so on. Applied applications of ATI have the same outcomes as the laboratory work summarized by Cronbach (1975): ATI does not work as an LD intervention model (Kavale & Forness, 1999; Good, Vollmer, Creek, Katz, & Chowdhri, 1993).

Further, substantial attacks of current LD practices come from the Dyslexia Studies Centers funded by the National Institute of Child Health and Development (NICHD) (Lyon, 1996). The NICHD reading disability findings are increasingly influencing policy debates regarding LD intervention models and the usefulness of the widely adopted LD classification criterion of a severe discrepancy between ability and achievement. Diagnosis of LD through determination of the size of the ability-achievement discrepancy, involving administration of one or more IQ tests and one or more achievement tests, is *the* single most frequent activity of school psychologists. There are many problems with the use of the severe discrepancy criterion for LD eligibility.

First, the exact size of ability-achievement discrepancy is significantly less reliable than either of the tests used to determine the discrepancy. Nevertheless, significant decisions are often made about LD eligibility and allocation of thousands of dollars for special education services on the basis of a few points in the ability-achievement discrepancy. We have never met anyone who is certain that a 15- or 16-point ability-achievement discrepancy truly indicates greater need than a 13- or 14-point discrepancy. Moreover, nearly everyone acknowledges that repetition of the ability and achievement measurement a week later likely would change the size of the discrepancy. Although prominent in federal regulations (see 34 C.F.R. 300.541), the ability-achievement discrepancy is fraught with measurement error.

An even more fundamental issue about the use of a severe discrepancy to determine LD eligibility is the NICHD findings about separating poor readers into two groups: one with higher ability than reading achievement that is eligible for LD and a second group with relatively low reading achievement and ability that is not currently eligible for LD. According to the NICHD researchers this distinction on which nearly all of modern thought in LD rests is not valid!

> Results do not support the validity of discrepancy versus low achievement definitions. Although differences between children with impaired reading and children without

> impaired reading were large, differences between those children with impaired reading who met IQ-based discrepancy definitions and those who met low reading achievement definitions were small or not significant (Fletcher et al., 1994, p. 6).

The above criticisms of current LD classification practices are significant But there is more. The NICHD researchers have targeted the "wait to fail" phenomenon that is familiar to all school psychologists working in the early grade levels. It refers to a number of children who are referred for consideration of special education eligibility due to poor performance in reading. The initial referral often occurs at the end of first grade. The evaluation confirms poor reading achievement, but very frequently the ability-achievement discrepancy is not sufficient to classify the child as LD. The referral often is repeated in the second grade with the same result. The "wait to fail" children are often referred still again in third or fourth grade when, finally, the reading achievement is low enough in comparison to ability to meet eligibility standards. Unfortunately, the "wait to fail" phenomenon has harmful effects on children because, "For treatment, the use of the discrepancy models forces identification to an older age when interventions are demonstrably less effective" (Fletcher et al., 1998, p. 201; see also Fletcher, 1998).

Determination of ability-achievement discrepancies is a very substantial part of school psychologists' roles today in large part due to the federal regulation cited earlier (Reschly, 2000). It is highly likely that this practice will change in the near future. Currently, there is an Office of Special Education Task Force examining the LD issues and the implications of the NICHD studies. The NICHD studies severely undermine the rationale for the LD severe discrepancy criteria and the adoption by some states of alternative criteria that do not use ability-achievement discrepancies illustrate that other alternatives do work (Reschly et al., 1999). Moreover, states have enormous latitude in how disabilities are conceptualized and assessed including the option of not classifying students needing special education services by disability categories (see 34 C.F.R. 300.125; Tilly et al., 1999). The LD paradigm clearly is shifting with probable substantial influences on school psychology.

Intervention Integrity and Experimentally Validated Interventions

Further impetus for the school psychology paradigm shift comes from the late 1990s movement toward limiting interventions to those for which there is empirical support. This movement originated in the health professions where managed care companies increasingly restricted payments to health care providers such as physicians and psychologists for treatments that lacked data confirming effectiveness. The applications to school psychology sometimes appear under different terminology (e.g., evidence-based education, empirically supported interventions). The idea is the same as in the health care professions. Professional practices should focus on treatments or interventions for which there is data-based support. Moreover, stronger treatments are preferred to weaker treatments. Careful analyses of current roles find many poorly supported practices such as use of ability-achievement discrepancies to diagnose LD. Analyses of the effectiveness of various practices appear in the literature (e.g., Kavale & Forness, 1999) and problem-solving methodologies attempt to combine empirically validated treatments with continuous data collection and formative evaluation to ensure that these practices do in fact produce positive results for individuals (Fuchs & Fuchs, 1986; Tilly, this volume).

Related to the concerns about the empirical bases for many school psychology practices is the failure to implement many interventions as they were designed or intended. Basic intervention principles often are not implemented in IEPs, special education programs, and pre-referral interventions, and these interventions typically are not evaluated using individualized, treatment-sensitive measures. Intervention integrity or fidelity of treatment has a significant impact on outcomes (Flugum & Reschly, 1994; Telzrow, McNamara, & Hollinger, 2000) and systematic assessment of treatment integrity as well as outcomes will become increasingly prominent in school practice as the field responds to the demands for data-based practices.

Disproportionate Minority and Gender Representation

Disproportionate minority and gender representation in special education has come under increased scrutiny during the 1990s (MacMillan & Reschly, 1998; Reschly, 1997). Analyses of data from the U.S. Department of Education reveals a male to female ratio of approximately 2:1 in LD and 4:1 in ED. Moreover, representation patterns vary significantly by race/ethnicity with (a) Native Americans over represented in LD, (b) African-Americans in the MR and ED categories, (c) Hispanics slightly *under* represented in the several categories, and (d) Asian-Pacific Islanders markedly *under represented* in LD, ED, MR, and Speech/Language (USDE, 1998, 1999, 2000). Although many analyses of this issue have focused on testing and placement processes, the main issue is the effectiveness of special education programs for students with mild disabilities and the usefulness of school psychology services in overcoming patterns of low achievement. Major changes are needed in school psychology and special education in order to meet the concerns raised by disproportionate gender and racial/ethnic representation.

Paradigm Shift Policy Statements and Professional Association Policies

Attention to the most effective ways that school psychologists can promote the mental health and educational interests of children and youth has been prominent in the school psychology literature for at least five decades (e.g., Cutts, 1955; Gray, 1963). The current movement toward a paradigm shift and system reform has its roots in events that began about 20 years ago. The various events and statements are summarized briefly here with references provided for those interested in tracing the evolution of important themes. Two conferences on the future of school psychology set the tone for later developments (*School Psychology Review*, 1982; Ysseldyke & Weinberg, 1981). The futures conferences established strong assertions regarding the inadequacies of the traditional school psychology focus on determining eligibility for special education using standardized tests of ability and achievement, unreliable and invalid projective assessments of personality and psychopathology, and perceptual-motor measure of dubious merit. Alternative roles were explored in these conferences.

Themes in the futures conferences were further advanced by the products developed in the National School Psychology In-service Training Network (Ysseldyke, 1984) and by the first *Blueprint* that delineated the key competencies needed by school psychologists in order to assume new roles (Ysseldyke, Reynolds, & Weinberg, 1984). These themes were asserted even more strongly in two statements adopted as official policies by the National Association of School Psychologists (NASP) (1985, 1986). These statements emphasized the development of service delivery systems that were not driven by categorical labels. The debate over system reform was sharpened by an exchange of articles in a 1988 volume of *School Psychology Review* (Hynd, 1988; Kauffman, 1988; Reschly, 1988a, b). The foundations for system reform were vastly improved by two volumes published by NASP (Graden, Zins, & Curtis, 1988; Stoner, Shinn, & Walker, 1991; Shinn, Walker, & Stoner, 2002).

Improving assessment and linking assessment to intervention was the theme of a monograph commissioned by the federal government and developed by a team of NASP leaders (National Association of School Psychologists, National Association of State Directors of Special Education, Office of Special Education Programs, 1994). Attention to this basic theme and the development of effective interventions prompted the development of an updated revision of the *Blueprint* (Ysseldyke et al., 1997). Although 10 domains were specified regarding graduate education and practice, high levels of competence in four domains were expected of all school psychologists. These four domains might be seen as the core of school psychology training and practice:

1. Interpersonal communication, collaboration, and consultation

2. Student diversity in development and learning

3. Legal, ethical practice, and professional development

4. Data-based decision making and accountability

Perhaps most important to the paradigm shift is the crucial domain of data-based decision making and accountability. The *Blueprint* domains are consistent with contemporary trends regarding experimentally validated treatments (see prior discussion) and the movement toward comprehensive school mental health programs that stress prevention and early intervention (Adelman & Taylor, 2000; Nastasi, 2000). Finally, the publication of a volume in 1999 devoted to functional assessment and special education system reform provided further guidance to practitioners and policy makers regarding the school psychology paradigm shift (Reschly et al., 1999).

Summary

We are *compelled* by problems in the current system to consider alternatives to conventional referral, assessment, classification, and placement practices. These pushes provide the motivation to consider alternatives. Futures conferences, policy statements, blueprints for training and practice, and the professional literature over the past two decades have described the necessary changes in the delivery system that will permit the delivery of psychological services that are more closely related to the needs of children, youth, and families. In our discussion of these influences we know that we left out many important events and persons due to space limitations. We believe that the major themes especially in school psychology were addressed. Although the way to a reformed and more effective practice of school psychology has been charted in a general way, descriptions are needed of specific bodies of knowledge, assessment skills, and intervention competencies.

ADVANCES IN ASSESSMENT AND INTERVENTION

We are drawn to delivery system alternatives by advances in assessment and intervention techniques that have the promise to improve substantially the outcomes of educational services for children and youth with learning and behavior problems. Implementation of these alternatives has already produced a revolution in how school psychology is practiced and it is likely that further and more widespread changes in practice will occur as part of efforts to improve educational outcomes.

Accountability for All Through Outcomes Criteria

A major shift to a focus on outcomes rather than intervention inputs or processes is apparent in the reform literature. An outcomes orientation has been applied to analyses of over representation of minority students in special education and to a wide variety of other practice issues (Reschly, 1980; Reschly & Tilly, 1999). Greater attention to documentation of outcomes is pervasive in general and special education (Ysseldyke & Marston, 1999). The push to document the outcomes of education has its roots in concerns by business and community leaders about the relatively low level skills exhibited by the people they hire, and in concerns about the relatively low standing of American students in international comparisons.

For many years after enactment of the Education of All Handicapped Children Act of 1975 (now IDEA, 1997, 1999), accountability for special educators meant documenting the *processes* used to serve students with disabilities (e.g., due process compliance, multidisciplinary teams, parent involvement), *placements* following the least restrictive environment principle, and *services* that were based on comprehensive evaluations and written individual educational programs. Virtually no one asked whether these dramatic changes in how special education was delivered produced better results. Several federal laws changed the situation; the crucial question now is how effective are special education services in producing gains in *academic and social* domains for students with disabilities. A major feature of the new accountability is the mandatory inclusion of students with disabilities in district and state assessment programs (McDonnell, McLaughlin, & Morison, 1997; Ysseldyke & Thurlow, 1997).

Professional services by psychologists and educational programs change when an outcomes focus is established, particularly if accompanied by significant incentives and disincentives based on results. Practices and programs that cannot be linked to positive outcomes for students are diminished increasingly while those associated with good outcomes (i.e., are experimentally validated) increasingly expand.

Problem-Solving Orientation

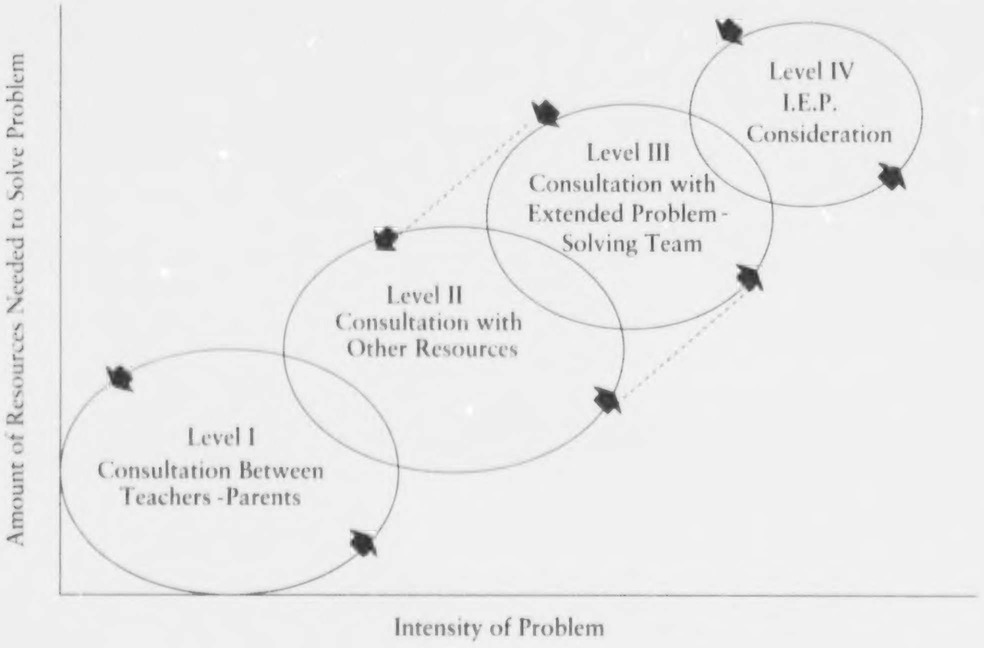
Rigorous, data-based problem solving is crucial to improving the student outcomes associated with school psychology services. Several problem-solving approaches have appeared in the literature, with slight variations related to intended population or type of problem (Bergan & Kratochwill, 1990;

Rosenfield, 2000; Rosenfield & Gravois, 1996; Tilly, this volume; Tilly et al., 1999). All have the common features of problem definition, direct measures of behaviors, design of interventions, monitoring progress with intervention revisions as necessary, and evaluating outcomes. All are more consistent with the experimental than the correlational tradition in psychology and the short-run empiricism described by Cronbach (1975) as a promising replacement for interventions guided by aptitude by treatment interactions.

Problem solving is an essential component of implementing advances in assessment and interventions. We caution against superficial versions of problem solving, particularly those that do not use precisely defined problems, direct measures of behavior, pre-intervention data collection, intentional application of instructional design and behavioral change principles, frequent progress monitoring with program changes as needed, and evaluation of outcomes through comparisons to initial levels of performance. As Fuchs and Fuchs (1992) noted, "feel good" consultation is likely to make the participants (e.g., psychologist and teacher) feel good, with little benefit to students.

Problem solving provides the overall structure for an alternative delivery system. Different levels of problem solving are illustrated in Figure 1, which represents the system developed by the Heartland Area Education Agency in Iowa (Ikeda, Tilly, Stumme, Volmer, & Allison, 1996). The four levels of problem solving involve different degrees of intensity and different levels of special education and support services involvement. The first two levels are conceived as occurring entirely within general education with occasional involvement of related services providers such as psychologists. Level III problem solving, involving related services personnel, is a rigorous, data-driven, intervention effort that must meet exacting standards for parental involvement, problem definition, systematic data collection, problem analysis, goal, intervention plan development, intervention plan implementation, progress monitoring, and decision making. Detailed standards have been developed for each of these problem-solving components (Tilly et al., 1999). Interventions meeting these quality indices must be implemented for a reasonable period of time and found to be insufficient according to progress monitoring data before Level IV problem solving (special education consideration) is initiated.

Figure 1. Heartland Area Education Agency problem-solving model



In Level IV problem solving classification of the student as needing special education may be considered based on documentation of (a) substantial discrepancies from average levels of classroom performance that (b) are not resolved to a sufficient degree by high quality interventions in general education, or behavioral discrepancies that (c) require programming elements or instructional intensity beyond the resources that reasonably can be provided in general education, and (d) there is a clear need for the kind of services provided in special education. Note that all four elements must be met. This system depends heavily on problem solving, curriculum-based and behavioral assessment, and high quality interventions. A critical eligibility criterion is resistance to intervention (Gresham, 1999), with rigorous standards established for quality of interventions. Further discussion of each of these areas appears in other chapters in this volume.

Although we strongly endorse the experimentally supported interventions movement, a problem-solving framework is essential even with the most effective interventions. Interventions are judged to be effective on the basis of group comparisons and the accumulation of single subject data. There are, however, *individuals* who are non-responders or whose responses to treatments are different than typical participants. A self-corrective problem solving methodology accounts for the individual responses to treatments, ensuring that what typically works does indeed work for an individual, or that interventions will be changed in the light of data indicating a weak or inadequate response.

Functional Behavioral Assessment

Functional behavioral assessment is emphasized in IDEA (1997, 1999) as an essential component of all special education eligibility and programming evaluations (see 34 C.F.R. 300.532). Significant advances in assessment technology permit greater emphasis on measures functionally related to interventions. Most of these advances can be classified as behavioral assessment procedures (Shapiro & Kratochwill, 2000). The knowledge base for practice has improved substantially with the development of curriculum-based assessment and Curriculum-Based Measurement (Howell & Nolet, 1999; Shapiro 1996; Shinn, 1998). Advances in the assessment of instructional environments provide further technological support to academic and behavioral interventions (Ysseldyke & Christenson, 2002). Parallel advances in behavioral assessment of social and emotional phenomena have led to equally substantial improvements in practice in these areas (Gresham & Noell, 1999).

We believe that assessment will continue to be a salient activity in the roles of school psychologists; however, vast changes will occur in assessment purposes, techniques, and outcomes. The focus will be increasingly on fostering behavioral competencies, rather than identifying deficits, through the implementation of direct measures of relevant behaviors in natural settings. The technology for that kind of practice has improved dramatically and continues to advance.

Instructional Design

Behavior assessment and instructional design are inextricably related in the functional assessment of academic behaviors. The marriage of instructional design principles (Becker & Carnine, 1980; Engelmann & Carnine, 1982; Howell & Nolet, 2000) with behavioral intervention technologies has produced impressive outcomes for students (Carnine, Silbert, & Kame'enui, 1997; Kame'enui & Carnine, 1998). Instructional interventions guided by experimentally validated methodologies, monitored with Curriculum-Based Measures, revised as necessary using formative evaluation rules, and supported by systematic reinforcement contingencies produces effect sizes of +1.0 standard deviation (SD; Fuchs & Fuchs, 1986; Kavale & Forness, 1999). The typical resource interventions or one-to-one tutoring interventions have smaller effect sizes in the range of 0.3 SD to 0.7 SD (Elbaum, Vaughn, Hughes, & Moody, 2000; Kavale & Forness, 1999; Swanson, 1999). Readers are urged to consult this literature in formulating approaches to academic skills teaching and remediation.

Behavior Change Principles

The continuing success associated with applications of behavioral psychology to a wide variety of learning and behavior problems is another crucial link from the scientific literature to current and future school psychology practice (Stoner, Shinn, & Walker, 1991; Shinn, Walker, & Stoner, 2002; Sulzer-Azaroff

& Mayer, 1991; Weisz, Weiss, Han, Granger, & Morton, 1995). The effect sizes of 1.0 SD or more for applied behavior analysis interventions regarding social, behavioral, and academic problems cannot be matched by any other intervention theory or approach (Kavale & Forness, 1999). Although other perspectives are sometimes incorporated into behavioral formulations (e.g., Dishion & Patterson, 1999), the fundamental basis of the vast majority of effective approaches continues to be an analysis of environmental influences and systematic changes in antecedent, situational, and consequent events. We believe that the increased effectiveness of school psychology and special education depends directly on better use of behavior change principles within a problem-solving framework.

Summary

The paradigm shift movement is based in advances in assessment and interventions that "pull" school psychology and special education toward system reform. One of the main themes in system reform is improved application of the available knowledge on assessment, instruction, learning, and behavior change. The movement toward non-categorical classification will place less emphasis on extensive psychometric testing to confirm eligibility and more emphasis on interventions guided by functional analyses of behavior, leading to implementation of effective interventions in academic and social-behavior domains. Paradigm shift will cause dislocations. New skills will have to be mastered and applied to resolve the contradictions between the new and old systems. Some of the key issues surrounding system reform are discussed in the next section.

Social and Political Validity of System Reform

We acknowledge the difficulty of change, but, at the same time, we observe that significant changes have occurred over the last 25 years. There has been a revolution in student rights and parental involvement in decision-making regarding the education of students with disabilities. For example, prior to about 1975 many school districts did not request parental consent for evaluations to determine eligibility for special education. These changes occurred very rapidly after federal court cases, state legislation, and then federal legislation mandated the implementation of the due process protections that are now taken for granted by most practitioners.

The example of the relatively rapid implementation of due process protections in special education is an illustration of another fact about system reform changes: they are driven more by political influences than data or science (Ysseldyke, 2001). The due process mandate was a political solution to a serious dilemma: How to ensure that special education decision making was fair and in the best interests of students. Similarly, we expect that system changes away from categorical designation of students with mild disabilities (e.g., LD, MMR) and the heavy reliance on standardized tests to determine eligibility will be political as well. We also note that science alone is unlikely to produce the changes that are needed; however, political shifts (e.g. accountability demands) combined with science (e.g., problem solving and experimentally supported interventions) are likely to produce the changes we have discussed.

Challenges and Consequences of Change

Change has obvious consequences and challenges for individual professionals. The major statements on system reform emphasize the importance of the *process* whereby reforms are designed and implemented. The system reform statement endorsed unanimously by the Delegate Assembly of the National Association of School Psychologists in March 1985 stressed, "the development and piloting of alternatives" as well as the "... need to assure that no child is put at risk for loss of services while the change process is occurring." (National Association of School Psychologists, 1985). Since 1985, NASP has devoted considerable resources to critical elements of system reform including policy advocacy and continuing education of school psychologists (Cobb & Dawson, 1989; Graden et al., 1988). Politically valid reforms have the critical elements of fair and equitable distribution of resources, involvement in decision making, protection of jobs, and continuing education opportunities (Jenkins, Pious, & Peterson, 1988).

Resource Allocation

System reform often involves development of different ways to fund programs. Two protections are critical. First, system reform cannot be allowed to become a way to reduce financial support of special and remedial programs for children and youth. The legitimacy of system reform requires at least stable resources. Second, alternative methods of funding programs and alternative resource allocation procedures should first be pilot tested in smaller units (e.g., a few districts, or regional units in a state) before applied to the entire system. This approach worked well in the Iowa system reform effort and is being implemented currently in other states such as South Carolina and Illinois.

Involvement in Decision Making

Constituents of the present system should be involved in decision-making regarding the des[illegible] of alternative delivery systems. Constituents should be viewed broadly, including related services professionals, special educators, general educators, parents, and children and youth. Leadership by psychologists is essential to successful system reform; indeed, the major advances in assessment and interventions on which reforms are based originated in basic and applied psychology! Ensuring that the available knowledge base is implemented is a crucial role for psychologists in system reform.

Protection of Jobs

Practitioners in the current system are asked in system reform to support significant changes that affect the kinds of professional roles that are valued and how they do their jobs. The roles of some practitioners may change dramatically. The legitimacy of system reform depends on guaranteeing the employment of these persons, at least in the short term, and providing for them ample continuing education opportunities to acquire skills that are needed in the new system. Each individual should get a fair shot at continuing their employment in a role that is valued if they are willing to acquire skills that are needed in the new system.

Continuing Professional Development

Continuing education opportunities are perhaps the single most important feature of system reform. Most of us have ample continuing education needs, expressed eloquently by one of our leading scholars, "I have saved my course notes from graduate school. With the exception of statistics, everything I was taught no longer is true" (Bardon, 1981, p. 202). The advances in assessment and intervention are not well represented in all graduate school psychology programs; indeed, it is our observation that many of us who are university faculty have continuing education needs that equal and, in most cases, exceed those of typical practitioners!

Traditional school psychology training provides an essential foundation for system reform that we can use as a base in meeting our continuing education needs. Our knowledge base in learning, normal and exceptional patterns of development, sensitivity to cultural differences, measurement, assessment, counseling methods, and relationship skills is unique among related services personnel and essential to successful performance of roles in new systems. To this traditional knowledge base we need to add systematic problem solving, consultation, principles of behavior change, principles of instructional design, and functional assessment.

The design of continuing education is crucial (Reschly & Grimes, 1991). Most current continuing education can be characterized as "train and hope" because actual supervised practice with feedback in implementation of new skills is not provided. Effective continuing education that leads to persistent changes in professional services requires a multi-step process; that is, (a) awareness and knowledge acquisition, (b) demonstration, (c) simulated try-out with feedback, (d) implementation in the work setting with feedback, (e) additional training opportunities to overcome problems that emerge in implementation, and (f) support and incentives for changing roles through performance evaluation and other mechanisms.

Paradigm Shifting and Leadership by Psychologists

The paradigm shift is occurring at different rates and in varying forms throughout the United States. There are, however, few states that have not been involved in special education reform, and the pace of change has quickened in the latter part of the 1990s. We acknowledge that paradigm shift does not occur quickly or easily; indeed, many unanticipated barriers have been encountered and will be encountered in the future. Despite the necessity to acknowledge significant impediments to reform, we remain optimistic about the delivery system and role changes described in this and other chapters in this volume. Our faith is based on a conviction that the delivery system and role changes are in the best interests of children, youth, and families, and that greater accountability and application of the outcomes criterion will increasingly invigorate and strengthen the support for a paradigm shift. Fundamentally, the paradigm shift involves a change from the correlational science of standardized testing, prediction, and placement to an experimental science of interventions designed to maximize learning guided by short-run empiricism-problem solving. Paradigm shift means making differences in, rather than predictions about, students' lives.

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2 Best Practices in School Psychology as a Problem-Solving Enterprise

W. David Tilly III
Heartland Area Education Agency 11

OVERVIEW

Adoption of problem solving in schools is an explicit and systematic movement to import the scientific method into applied educational practice and eschew purely a "philosophical" basis for practice. All the sciences—astronomy, biology, chemistry, physics—had their roots in and eventually broke free from philosophy (Baum, 1994). Indeed all of the sciences reached a point in their development where philosophical reasoning, assumptions, and practice no longer sufficiently addressed problems at hand. In the very same way, traditional practice in school psychology and special education is no longer sufficient to address students with disabilities problems in our schools. A change is necessary in both (a) the way we think about special education and (b) the practices we use to accomplish service delivery. This chapter presents the conceptual and operational underpinnings of a problem-solving special education system designed to improve educational results for students with disabilities.

CHANGE IN THINKING

In philosophically based systems, a particular framework for reasoning is used. Philosophers reason from premise to conclusion: *If this is true, then that would be true* is the general logic form. The order of events is: *Premise leads to observation leads to conclusion.* In philosophy, truth is absolute: If the premises and the reasoning are sound, then the conclusions must follow. As an example of this logic, ancient chemists speculated that matter had certain properties such as wet, dry, cold, and hot. Given that these assumptions are correct, philosophers observed the world and concluded such things as fluid water has more of the "wet" quality and wood fires have quite a lot of the "hot" quality.

Much of our reasoning in current school psychology and special education practice follows this same logic set. The process of identifying students with learning disabilities is an example. The framers of the Education of the Handicapped Act (P.L. 94-142) wrote a series of assumptions into the law about the nature of learning disabilities (e.g., severe discrepancy, not based on presence of other disabilities, etc). Based on these assumptions, assessors spend much time observing the world in a very systematic way (i.e., testing), and then observing whether specific students have or do not have qualities reflective of learning disabilities. As before, if the premises and logic underlying the practice are sound, then so would be the conclusion.

When sciences emerge and break from their philosophical roots, a predictable process ensues. First, practitioners accumulate a growing number of anomalies that cannot be explained sufficiently using the accepted philosophical premises and reasoning. As a result, practitioners begin relying less on "accepted premises and conclusions" as the basis for study and begin observing natural phenomena as the basis for their analyses, which leads to a shift in the manner in which reasoning occurs. Scientists do not need apriori premises to form the basis for reasoning. Instead, scientists reason from observation to hypothesis to test to tentative conclusion. The general form is, "This is observed; what might be true that could explain this observation?" A test of the explanation then is devised. In science, truth is always relative, tentative, and able to be disconfirmed by further observation and investigation.

The break in special education and school psychology with the philosophical bases underlying much of our practice is beginning in many places. The predictable process depicted in the previous paragraph is underway. Educators and school psychologists have accumulated large numbers of "practice anomalies" that result from the failure of underlying assumptions and practices (Reschly & Tilly III, 1999; Ysseldyke & Marston, 1999). Examples include disability labels that typically do not provide sufficient information for effective treatment planning (Heller, Holtzman, & Messick, 1982), assessment processes that are often unreliable in differential diagnosis (Epps, Ysseldyke, & McGue, 1984), frequent use of assessment procedures without documented treatment validity (Howell, 1991; Salvia & Ysseldyke, 1998), and frequent implementation of poor quality educational interventions (Flugum & Reschly, 1993; Gresham, Gansle, Noell, Cohen, & Rosenblum, 1993). The logic sets that provide the foundation for much traditional practice have not, upon further investigation, resulted in the predicted positive outcomes for students with disabilities (Ysselkyke, Thurlow, & Bruininks, 1992). Thus, practitioners have begun looking elsewhere for solutions to intransigent educational problems.

Movement from philosophically rooted practice to scientifically based practice is a values-based set of actions driven by multiple factors. There are school psychologists who reject the idea that psychology or education should be addressed scientifically, and these positions are respected. However, in the current milieu, there are compelling rationales to move in this direction. These include:

1. Many of the assumptions underlying previous models of practice have been unsupportable in practice. For example, the idea that there are interventions that can be matched to student characteristics that predictably result in improved outcomes for students has not been borne out on a large scale (Arter & Jenkins, 1977; Kavale & Forness, 1987; Reschly & Ysseldyke, 1995). A problem-solving model does not rely on unproven assumptions of practice.

2. Legally driven, administrative practices are expensive and not predictably related to student improvement (Kavale, 1990). The current special education system invests much energy and resources into the administrative process of identifying individuals with disabilities. This focus siphons off resources that could be directed toward processes with documented relationships to student improvement. Problem-solving models require implementers to focus their attention primarily on educational rather than on administrative decisions. Thus, problem analysis, progress monitoring, and program evaluation decisions take on additional emphasis.

3. Improved technologies have become available in recent years that allow practitioners to become more effective in an intervention-based role (Gresham & Noell, 1999; Howell & Nolet, 1999). Most interventions in school psychology practice represent field-based implementations of research-based practice. All existing school-based practices must be evaluated in the context of other practices designed to accomplish the same purposes. With a burgeoning set of empirically demonstrated practices, ethical practice demands that we examine carefully current practices in light of emerging technologies for improving student performance.

4. The accountability movement is driving change in all of education (Marzano & Kendall, 1996; Thurlow, Elliott, & Ysseldyke, 1997). With the reauthorization of the Individuals with Disabilities Education Act in 1997 (IDEA 97), students with disabilities must now be included in state and district accountability systems and the results of their performance reported to the community. Increased scrutiny of educational programs for students who do not perform successfully in the general curriculum likely will be a byproduct of this movement. It is unclear at this point what effect this increased attention will have for students with disabilities. What is clear is that scrutiny has shifted in special education compliance at a federal level from examining primarily administrative practice (i.e., identification) to a more balanced approach

emphasizing results for students with disabilities (National Association of State Directors of Special Education, 1995).

5. Most importantly, despite our best efforts in educating students with educational problems, still many of them are not succeeding in school and after. Continuing with a model that is ineffective for large numbers of students without seeking more effective alternatives is ethically questionable and practically unwise. Thus, a move toward problem-solving structures is a data-based attempt to improve outcomes for students with disabilities.

Given these challenges, movement toward problem solving provides a major leadership opportunity for school psychologists to improve public education. Most of the skills necessary for effective implementation are those advocated by the National Association of School Psychologists (NASP) (Yesseldyke et al., 1997) *School Psychology: A Blueprint for Training and Practice II*. As a result, school psychologists are positioned well to lead problem-solving efforts and to assist educators in improving educational practice.

PROBLEM SOLVING AS A SYSTEM STRUCTURE

Moving special education toward a problem-solving proposition requires changing both system structures and practices within the system. The historical system grew out of legal mandates (EHA, IDEA) that dictate many structures and practices in special education. From Individual Education Plans (IEP) development through procedural safeguards and due process provisions, special education structures have remained fixed for more than 25 years. How might a shift to a problem-solving structure occur if so many things are dictated? The answer is that the "whats" of special education are fixed. For example, no matter where one lives in America, students with disabilities are guaranteed heightened due process, procedural safeguards, quality assessments, and IEPs. Considerable variability in "how" these "whats" are carried out is allowed to states by the Federal Office of Special Education Programs (Hehir, 1996; Tilly, Reschly, & Grimes, 1999). For example, states have wide latitude in how special education identification, assessment, and programming is carried out. One state may use a simple discrepancy process for identifying students with learning disabilities, another might use regression-based formulae to identify similar students, while a third state may use functional assessment procedures and non-categorical identification procedures. All can be legal. What is critical is that districts and states ensure that they meet the basic requirements of law.

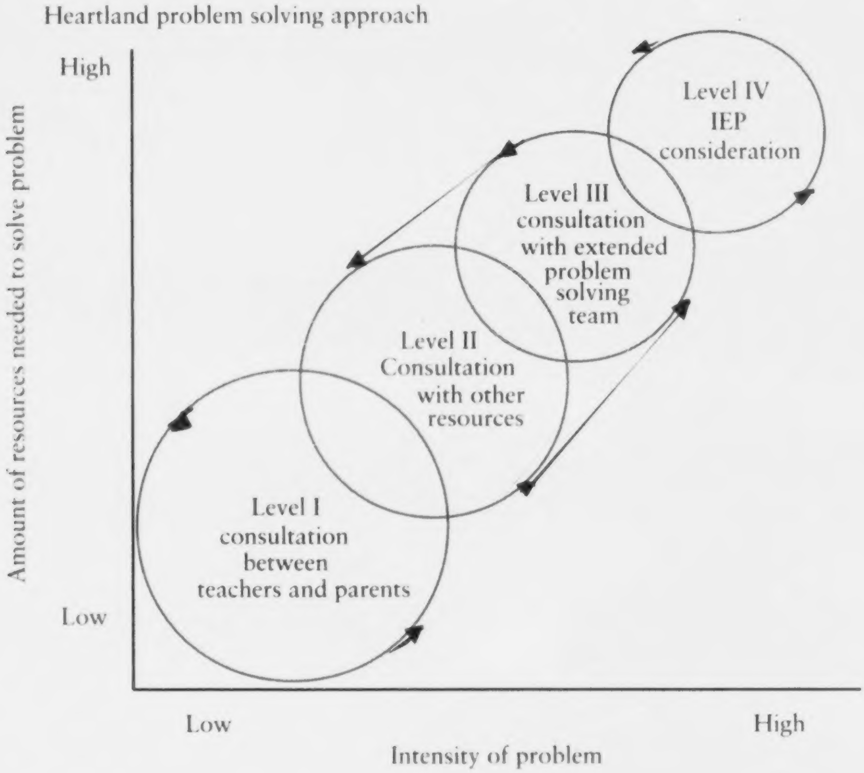
Shifting structures in special education requires rethinking some of the assumptions underlying how our system was structured originally. Most important is rethinking how services can be delivered in direct relation to need. States and districts in most cases have organized their services typologically. That is, students with different types of needs are grouped together to make service delivery to these students efficient (consider Talented and Gifted Education, Title 1, and Special Education as examples in our schools). Underlying this practice is the assumption that students' needs exist in discrete groupings (Ysseldyke & Marston, 1999) and that discrete groupings for service delivery will thus meet students' needs optimally. In reality, student needs exist more on a continuum. Some students need more or less services than others both within and across different "typologically labeled" groups.

The solution to this situation is to create ways that service intensity can be varied in direct proportion to individual student needs both within and outside special education boundaries. This situation is desirable from a student learning standpoint and cost efficient from a resource allocation standpoint. Instead of waiting for students to fall so far behind that their performance qualifies them for special education, resources can be expended within a problem-solving system early, when problems are less intense, in the hope of remediating them prior to their escalation.

One problem-solving model that accomplishes the goal of matching resources with problem intensity is the Heartland Problem-Solving Approach (Heartland Area Education Agency, 2001a). This model will be described because it is a general-case model that includes desirable characteristics from a number of different problem-solving models. Moreover, it has been implemented successfully in practice for more than 10 years, so its viability has been tested empirically.

In the Heartland Problem-Solving Approach (Figure 1), the abscissa represents the intensity of the edu-

Figure 1. Heartland problem-solving approach


Heartland problem solving approach
High
Low
Amount of resources needed to solve problem
Level IV
IEP
consideration
Level III
consultation
with extended
problem
solving
team
Level II
Consultation
with other
resources
Level I
consultation
between
teachers and parents
Low
High
Intensity of problem

cational problem experienced by the student. The scale ranges from low intensity problems to high intensity problems. The ordinate represents the amount of resources necessary to resolve educational problems. The circles in the center represent the ideal match between the intensity of any given problem and the amount of resources that may be warranted to address the problem.

Parents, teachers, counselors, school nurses, principals, building assistance teams, community providers, or others having direct contact with students may express concerns and initiate problem solving. In the Heartland model, assistance can be provided to students at any of four levels. These levels vary in terms of precision of problem identification, depth of problem analysis, as well as in systematicity and amount of resources brought to bear on the problem. Level I problem solving involves parent-teacher collaboration for addressing problems. At Level II, other teachers contribute expertise along with the primary teacher and parents to solve the problem. At Level III, related service persons such as school psychologists guide the problem-solving process with the other participants. Level IV continues problem solving at even a more intense level, and one of the questions addressed at this level is entitlement for special education (note that Level IV represents the smallest circle in the diagram, depicting that relatively few educational problems get to this level). At Level IV, problem solving continues. The only administrative difference is that in some cases, special education resources may be used to address students' educational needs as part of the problem-solving process. The next section describes briefly problem-solving practices at each of the four problem-solving levels.

LEVEL I: CONSULTATION BETWEEN TEACHER-PARENT

Level I problem solving typically begins when a parent or teacher has concerns about an individual child's performance. Problems can arise in any educational performance domain and there is no limit to the types of problems that might be addressed at this level. Typically a conference will be held between the teacher and parent(s) where a plan of action will be crafted.

At Level I, teachers and parents focus their attention on specific behavior(s) of concern. Typically they discuss the nature of a problem and consider strategies that may be effective. They then determine a course of action to follow and informally monitor whether the intervention works. At Level I, related services persons are not involved with defining the problem or implementing general education interventions. Indeed, Level I simply acknowledges the informal problem-solving system that has been used for decades within our schools. Level I practices are described in greater detail in Ikeda, Tilly, Stumme, Volmer, and Allison (1996). Level II problem solving begins when Level I has not been successful, or when either the parents or teacher determines there is a need for additional resources.

LEVEL II: CONSULTATION WITH OTHER RESOURCES

The purpose of Level II problem solving continues to be resolving the presenting problem. At Level II, additional resources are brought to bear on the problem, the processes are a bit more structured, and information from Level I problem solving provides the initial input into Level II problem solving. Components of the Level II process include (a) to more systematically gather information about the severity of the problem, (b) to re-define the problem if necessary, and (c) to develop and monitor new plans to address the problem. At Level II, most schools use assistance teams to address problems. These assistance teams consist of the child's parents and teacher, other teachers in the school, and local support staff (such as the guidance counselor) to the extent appropriate. Additional staff from outside of the school or the student also may participate on the team if deemed desirable and appropriate by the team.

During the initial Level II meeting, the assistance team discusses the concerns surrounding the performance of the child. Through this discussion, the assistance team serves as a resource to the teacher and the parent. The team helps clarify the nature of the problem further and offers strategies that the classroom teacher can use to address the problem. Parents and the teacher agree upon one reasonable intervention for addressing the problem. The team then decides each member's role for assisting with the intervention and develops ideas for evaluating the intervention. The intervention is implemented, and if performance does not improve, then the general education intervention is refined. This process recycles as often as needed.

Evaluations at Level II also help the school determine if accommodations under Section 504 of the Rehabilitation Act of 1973 are required. In this way, one problem-solving process can meet the requirements of multiple programmatic requirements. If a 504 plan is deemed appropriate, accommodations are implemented to support the child in the particular problem area. Ongoing monitoring of interventions helps gauge the effectiveness of accommodations. This frequent review allows only those accommodations that are helpful to be continued. If interventions and accommodations at Level II do not change the behavior at desired rates or to desired levels of performance, then the child is referred to the Extended Problem-Solving Team for further consideration.

LEVEL III: CONSULTATION WITH EXTENDED PROBLEM-SOLVING TEAM

As illustrated in Figure 1, Levels II and III of the problem-solving overlap and are connected. These connections illustrate that in some cases the processes and procedures used at these levels overlap. The primary distinction between Level II and Level III is that related service personnel with specialized expertise and techniques are significant members of the Level III extended problem-solving team. School psychologists, instructional consultants, school social workers, speech and language pathologists, occupational therapists, and physical therapists among others all can participate in problem-solving activities at Level III. At this point in the process, the purpose of their involvement is neither special education assessment nor programming, but instead the purpose is to help resolve the presenting problems in general education. To this end, a systematic and structured deployment of general education resources will be undertaken by the Extended Problem-Solving Team at Level III.

At Level III, the Extended Problem-Solving Team reviews all information collected at Level I and Level II to begin their analysis. They examine whether the problem was identified accurately at Level I and Level

II and the effectiveness of interventions to date is reviewed. The team also ensures that all appropriate screenings (e.g., hearing, vision, health) have been conducted to rule in or out other plausible contributors to the problem. Based on these data, the team uses a standardized thought process to guide their next steps (Heartland Area Education Agency, 2001b). The team specifies an assessment plan to guide collection of additional problem-related information. Data then are collected to determine the nature and severity of the problem (problem identification) as well as to analyze problem etiology (problem analysis). At Level III, the problem analysis will be systematic and more in depth than at Level I or Level II. That is, an explicitly articulated thinking process will be used in problem analysis. This thinking process involves the integration of information from multiple sources with research-derived knowledge and experience in the problem area to specify and test hypotheses regarding specific etiology of the observed problems. Based on the problem analysis, an intervention plan with a high likelihood of success can be written. As a part of this plan, specific goals are written, and a progress monitoring plan—including a decision-making plan—are put in place. The intervention then is implemented and its effectiveness evaluated. The most critical distinction between Level III and previous levels is that Level III requires practitioners to use a structured thinking process and specialized tools to assist in the problem-solving process. It is at this level where specific professional standards of quality problem solving have been defined (Iowa AEA Directors of Special Education, 1994) that serve as expectations for practitioner performance.

Implementing general education interventions through problem solving at Level I through III has not delayed special education service to students. Indeed, services have been brought to bear earlier on educational problems than would have been the case in previous systems. What has not happened is a simple movement of an educational problem from general education to special education without a systematic and thorough examination of potentially effective uses of general education resources. One key to understanding this perspective is to examine how the word "help" is used in our educational vernacular. If "getting a child help in school" means referral for a special education entitlement evaluation, then the problem-solving system certainly may use more time. If, however, "help" means providing the least intrusive services that remedy the problem, in the most enabling environment, then problem solving in general education is a preferable initial response to educational problems.

One question often asked about a problem-solving system is, *But doesn't the law require entitlement evaluation for all students who are suspected of having educational disabilities?* The short answer to this question is yes. However, for students to be entitled to special education services, they must both have an educational disability and need special education in order to receive a Free Appropriate Public Education (FAPE; IDEA 97). To provide needs-based, problem-solving services, this is one place where it is critical to think differently about historical special education practice. While IDEA 97 continues to require determination of both disability status and need for special education prior to conferring entitlement on any individual, the law does not prescribe an *order* in which these two tests must be attended to. Hence, for a child experiencing problems in a general education setting, if a direct assessment is conducted for the purpose of general education intervention, and the resulting general education intervention is successful in remediating the student's skill or performance problem, then the question of special education entitlement is moot. An individual may in fact have an IDEA-eligible disability. However, if they do not need special education in order to receive a FAPE, they are not entitled to special education services, and therefore no delay has occurred.

LEVEL IV: PROBLEM-SOLVING INTERVENTION AND ENTITLEMENT CONSIDERATION

In moving to Level IV, the extended problem-solving team acknowledges that special education resources may be warranted to address a student's educational problems. When taking a case to Level IV, all the due process and procedural protections available under IDEA are provided. One of these protections is asking parents for written permission to have their child evaluated with the intent of determining special education entitlement. It is at this point where special education entitlement becomes a consideration and thus parental notice and permission is sought.

Entitlement for special education is only *one* of the questions addressed at Level IV. The purpose of Level

IV problem solving continues to be determining interventions necessary to address student needs, including whether required interventions include special education services. As a result, the focus of assessment is on direct student performance and environmental variables that are modifiable and directly related to student learning (e.g., curriculum, instruction, the learning environment). During Level IV assessment, extensive record review is conducted since a large portion of the information necessary for the special education entitlement decision has been gathered throughout problem solving Level I through III. Additional problem-solving assessments are then conducted to address additional factors related to improving the student's learning. Specific procedures and criteria for identifying educational disability in a problem-solving system are beyond the scope of the current chapter. A detailed description of these procedures and a rationale for their use can be found in Tilly, Reschly, and Grimes (1999).

The important point to glean from the foregoing discussion of Level I through IV is that the problem-solving structure allows resources to flow to problems in direct proportion to problem need. It is a rational alternative to past typological resource deployment systems and is synchronous with emerging accountability needs in education.

In addition to the use of a problem-solving *approach* as a resource-deployment structure in schools, problem solving is also a structured thinking process that is used to attack problems directly. In Heartland, this thinking structure is referred to as the problem-solving process. Each of the circles in Figure 1 represent one application of the problem-solving thought process in practice. The problem-solving process is the same at every level of the process and recycles multiple times as interventions are carried out for an educational problem. Attention is now turned to describing the problem-solving process.

PROBLEM SOLVING AS A SET OF PRACTICES WITH A CONSISTENT LOGIC SET

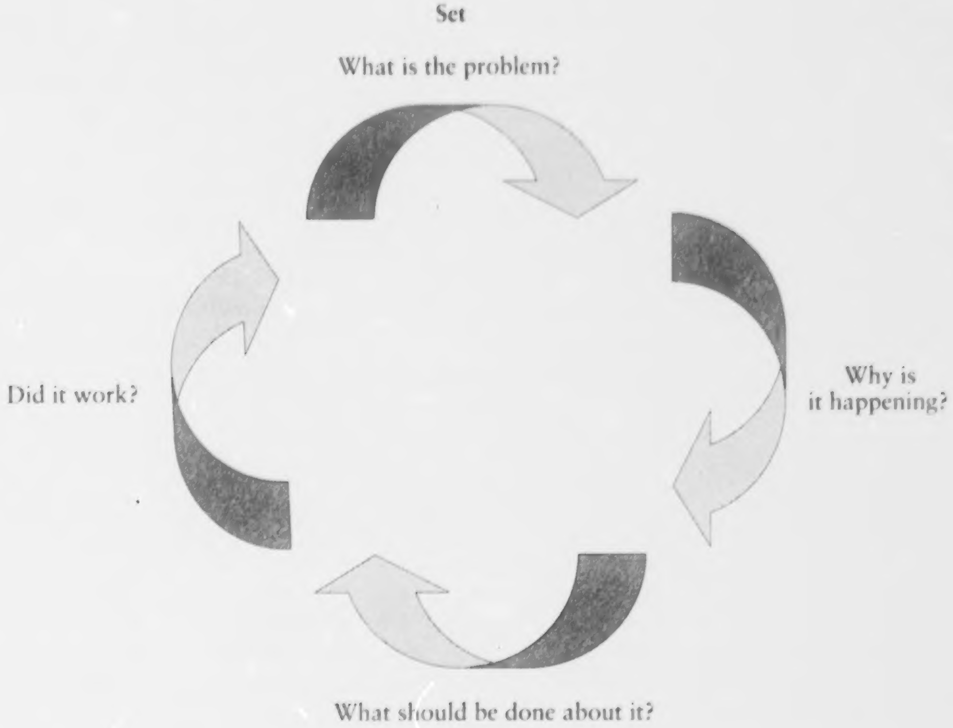
Many models of school psychological and educational problem solving exist, whether explicitly or implicitly referenced as such. These include Behavioral Consultation (Bergan & Kratochwill, 1990; Kratochwill & Bergan, 1990; Sheridan, Kratochwill, & Bergan, 1996); the IDEAL problem-solving model (Bransford & Stein, 1984); Functional Analysis of Behavior/Functional Behavioral Assessment (Repp & Horner, 1999; Tilly et al., 1998); the Scientist Practitioner Model (Barlow, Hayes, & Nelson, 1984); Curriculum-Based Measurement (Deno, 1995; Shinn, 1989); Applied Behavior Analysis (Baer, Wolf, & Risley, 1968); Action Research (Calhoun, 1994); and Heartland AEA's Problem-Solving Model (Reschly & Ysseldyke, 1995). Each model contains unique features, protocols, and language. In some cases, specific philosophies of science or theoretical orientations predominate, and differential emphasis is placed on alternate parts of the process.

No matter which specific approach or model of problem solving is considered, four thematic questions guide practitioner thinking: What is the problem? Why is it happening? What should be done about it? Did it work? A graphic depiction of this problem-solving logic set is contained in Figure 2. Clearly, problem solving is a logical process that most people do every day, which adds to its practical appeal. Problem-solving practices are intuitive, easy to understand, and easy to explain to parents and teachers alike.

The problem-solving thinking process applies equally to problems at every level of intensity, severity, and durability. What changes at different levels is the systematicity, rigor, precision, resource intensiveness, and possibly the intrusiveness of the tools and procedures that are used to accomplish the thought process in practice. For example, a small problem that may warrant a parent-teacher conference will not necessitate the same precision in problem identification, analysis, intervention, and evaluation as would a long-standing problem that deeply affects a student's quality of life. However, the same thinking logic could be applied to both circumstances. This consistency of thinking is an important component of the problem-solving process. Indeed, learning to apply and internalizing the thinking structures in the problem-solving process is perhaps the most critical variable in being able to implement it in practice.

The next section illustrates the reasoning that occurs when addressing each of the four problem-solving process questions. The synthesis is experience-based, success driven, and for continuity will be based on practice within the Heartland Problem-Solving Model presented earlier. This analysis will

Figure 2. Problem-solving logic



address only the *thinking processes* attendant to the questions as opposed to procedural steps. Critical problem-solving assessment and intervention tools are beyond the scope of this chapter and have been detailed elsewhere (Flugum & Reschly, 1993; Tilly & Flugum, 1995; Upah & Tilly, this volume).

What is the Problem or Issue?

In educational problem solving, it often makes sense to define problems as the difference between environmental expectations and what an individual does. Problems defined this way reflect naturalistically and accurately situations in educational settings. Indeed, most educational problems are brought to light when student performance deviates significantly from teacher expectations in classrooms. No matter where a problem falls on the severity scale, from mild through severe, the same thinking predominates in problem definition. Two things must be operationalized: What is the individual expected to do? What are they actually doing? The *difference between these two measurements represents the problem*, not the behavior that is the subject of the problem solving. This distinction may appear trivial. It is not. For example, physical aggression is not a problem if it occurs at the expected zero rate. The discrepancy between expectancy and performance in this case is zero—no problem. If, however, a student is expected to turn in 70% of her homework in order to pass her American Government class and she is turning in less than 20%, then there is a 50 percentage-point discrepancy between expectations and her actual performance—a substantial problem in most high schools. That the problem resides in the discrepancy is a key problem-solving concept that typically is easy to grasp.

In practice, substantial professional judgment must be exercised when defining problems. Judgment is required, for example, in selecting a standard against which to judge a student's performance. Clearly, the selected standard of comparison exerts great influence on the size of discrepancy observed, and thus care must be used when selecting an appropriate criterion. There are many appropriate standards to which a student's behavior might be compared. Professional experience, teacher preference, parental expectations, medical standards, needed skills in a future environment, curriculum standards, national norms, and local peer performance are all examples that could provide information on "expected" levels of student performance.

Selecting a performance standard representing acceptable performance can sometimes be tricky. Assessors must consider fairness and ethical and measurement issues in their selection, lest unfair or inappropriate problem identifications occur. Most often peer performance in the setting of interest can be used as an accurate indicator of acceptable levels of functioning. Peer performance has the advantage of representing typical performance locally, taking into account many variables (e.g., acculturation, regional differences, learning history differences, individual teacher biases) that may render other performance standards inappropriate. Once the comparison standard is selected, it is typically a straightforward process to create a measurement system that will allow direct measurement for both the standard and student performance. Once performance has been measured, simple arithmetic can be used to objectively scale the discrepancy.

There are important implications of defining problems as discrepancies. First, a discrepancy or difference score causes problem solvers to become objective about the nature of a problem. Important problem-related variables are defined in a way that promotes agreement about "what the problem is" by all involved parties. When there is objective agreement regarding a problem, there also can be objective agreement "that the problem is improving" as interventions are effective. Second, discrepancy-based problem definitions allow direct scaling of problem magnitude. The larger the discrepancy between observed performance and the standard, the larger the problem. Third, discrepancy-based problem definitions most often are created based on naturally occurring units of behavior, which usually lend themselves directly to analysis and intervention. For example, if a behavior of concern (response class) is aggression, direct measurement of the problem may include counting all incidents of kicking, hitting, or throwing of projectiles within a time span. The number of acts could then be compared to a peer standard collected during the same observation periods. The same problem could be quantified less directly through rating scales or personality tests that yield a standard score, a diagnosis, or description of personality variables. The former problem definition in this case lends itself directly to clear analysis and intervention using clearly articulated procedures with a high likelihood of successful resolution of the problem (O'Neill et al., 1997). The latter process may not.

The scientific method requires observation to drive hypothesis. When problems are defined in naturalistic behavioral units as discrepancies between what is expected and what occurs, direct observation drives problem analysis (i.e., hypothesis generation). The problem identification phase of problem solving tracks directly to the first state of scientific investigation; that is, observation of the environment as the basis for further analysis. Precise tools that yield consistent, objective measurement are used to provide a clear, unambiguous index of the situation. Problem definition then sets the stage for the second problem-solving phase: problem analysis.

Why is the Problem Occurring?

After operationalizing the problem, an analysis of problem etiology ensues. The purpose of problem analysis is to identify interventions for student problems that are (a) directly and empirically linked to problem occurrence and (b) have a high likelihood of successful outcome. Low level inferences predominate. That is, inferences are typically made about student skills rather than abilities, inferences are made about student behaviors rather than the traits the behaviors may represent, and most importantly inferences are made about the relationships between observed student performance and the highest likelihood variables related to observed performance. The necessity of low-level inferences in turn drives the types of assessments that are completed to assist in problem analysis. In most cases, problem-solving assessors move away from assessments of student disability to measures of student ability. Indeed, one school psychologist has captured the concept underlying problem analysis when describing its purpose as "Diagnosing the Learning Enabled" (Jeff Grimes, personal communication, 1998). Instead of measuring student performance to find disabilities, our purpose is to diagnose the conditions under which students' learning is enabled. Assessment for problem analysis requires quite different skills and procedures from those traditionally used in special education entitlement assessments.

The key to effective problem analyses is crafting clear summary statements or hypotheses that plausibly link (a) observed performance to (b) presumed causes (i.e., deduced from direct observation) of the performance problems which in turn lead to (c) treatment recommendations with a high probability of success. The general form of the logic is:

1. *For skill problems (can't do issues):* X problem is occurring because of Y. Therefore, if we do Z, the problem will be reduced (recall here that the problem is represented by a discrepancy).

2. *For performance problems (won't do issues):* When X antecedents occur, student name does Y in order to description of contingency. Therefore, if we do Z, the problem will be reduced.

The interventions represented by Z are thus logically linked to the analysis of the problems. Variables that served as targets for the problem analysis often in this case translate directly into actions that can be taken to enable learning.

As with problem identification, the critical shift in assessment for problem analysis is in thinking. The thinking shift in turn drives practice shifts. Rather than selecting tests for their technical characteristics and marketing, most competent problem-analysis assessments do not rely on published tests at all. In most cases, materials used for these assessments are selected directly from the materials and situations the student is working with in school. While these materials may not have been validated empirically for the purpose of disability identification, they operationalize the performance demands of the present environment and consequently are the most performance-valid assessment materials available.

Operationally, problem-solving assessors need to be able to tease out variables related to observed levels of performance in relation to direct environmental demands. The difference between problem-solving practice and historical practice is illustrated in the following example where two different approaches to analyzing the same student's reading problems are presented. One assessor may describe a student's reading performance as two standard deviations discrepant from their verbal ability with possible emotional overlays. These factors may indicate the presence of dysphonemic dyslexia, which may lead to prescribing a multi-sensory approach to reading instruction. Impressive sounding words, but not particularly helpful from an instructional perspective. What exactly is dysphonemic dyslexia? What specifically does it mean for this particular student? What skills does the student have and not have? What is the probability that a multisensory approach to instruction will work with this student and not with other students? What functional increment of information does the assessment process add?

A problem-solving assessor would likely assess the same student's reading skills directly. A sample of the student's oral reading would be collected. Specific-level tests (specific tests of component reading skills) would be given in priority order (skills with the highest probability of contributing to the reading problem are assessed first) and yielding a general picture of the student's component reading skills. Resulting analyses might hypothesize that the student's reading comprehension deficits result from (a) a lack of direct phonics instruction which has caused the student to read disfluently, (b) the student does not link new information to prior knowledge, (c) the student does not understand critical vocabulary words in the passages read, and (d) the student does not monitor meaning while reading. These data-based observations then would be used to develop a need specific intervention program tailored to the individual student. The difference between the former and latter reading assessments is their ability to directly pinpoint the specific skills that a student does or does not have and the level of inference needed to program instruction. As a general rule, the higher level the inference used to prescribe instruction, the less certain we can be in the effectiveness of the intervention prescribed.

Professional judgment and experience play a significant part in the analysis of problems as they did in problem identification. Indeed, it is not possible in problem-solving systems for assessors to competently analyze student performance in any performance domain if the assessor does not have significant knowledge in that domain. More than any other component of problem solving, problem analysis requires assessors to have broad and deep knowledge about the subject matter they are assessing. It is not possible to competently analyze the etiology of developmental reading problems if the assessor does not understand the process of learning to read. In the same way, it is not possible to discuss the etiology of behavior problems without reference to an accepted professional framework for understanding behavior. The content knowledge and experience requirements placed on assessors are perhaps the greatest professional development challenge associated with implementation of a problem-solving system.

The problem analysis phase of problem solving corresponds directly to the second stage of scientific investigation, that of creating hypotheses regarding variables that could plausibly explain the occurrence and nonoccurrence of the problem. To assist in hypothesis development, assessors can use whatever diagnostic measurements they choose, but those with most utility are those that measure student behaviors most closely resembling the behaviors that are considered problematic in the natural environment.

What Should be Done About It?

Once problems are defined and analyzed, the most complex part, if not the most challenging part, of problem solving is completed. When problem analysis is completed with integrity, reasonable environmental modifications with plausible connections to problem remediation usually become apparent. At this point, based on data collected from problem identification and problem analysis, educational interventions can be put in place.

There are a series of components that need to be thought through in setting up interventions. An intervention is defined in this context as a planned modification of the environment made for the purpose of changing behavior in a pre-specified way. Specifically, who will do what, when, and in what manner needs to be determined. A specific goal for the intervention may be set in measurable terms and procedures for monitoring the effectiveness of the intervention must be put in place. Any supports or materials that will be needed to carry out the intervention need to be created, and any training for implementers needs to be completed if necessary. An expanded discussion of educational interventions can be found in Upah and Tilly (this volume).

It is important that multicomponent interventions are considered for significant problems to ensure the highest likelihood of success. Not all components will be necessary for every intervention. However all of the components should be considered thoughtfully in all cases. Intervention components that should be considered when building educational interventions are presented in Table 1.

The intervention process in education is analogous to the component in the scientific investigation process that tests hypotheses. In this instance, educational programs are put in place, based on reasoned hypotheses (derived from problem analysis) in an attempt to confirm the accuracy of the problem analysis (hypothesis). Just as experiments in science are conducted to allow inferences to be made about hypotheses, so interventions in education allow us to draw inferences regarding the accuracy of our hypotheses—and to improve student performance in the deal.

Did It Work?

The final question addressed by the problem-solving process regards evaluation of interventions, both for-

Table 1. Intervention components

- *Antecedent interventions*: What changes can be made to the environment to prevent the problem from occurring?
- *Alternative skills instruction*: What skills can be taught to the individual that will reduce the occurrence of the problem?
- *Instructional consequent strategies*: What changes can be made to the instructional process to reinforce new skill acquisition and diminish problem occurrence?
- *Reduction-oriented consequent strategies*: What consequences, if any, need to be put in place to reduce the occurrence of the problem behavior?
- *Long-term prevention strategies*: What other individual or situational factors can we support to improve the individual's functioning?
- *Support for team members*: What support needs to be provided to team members to enable them to contribute to the intervention in an optimal way?

Adapted from Tilly, Knoster, Kovaleski, Bambera, Dunlap, and Kincaid (1998).

matively and summatively. Since it is not possible to predict with certainty the effectiveness of any educational intervention prior to its implementation, a progress monitoring process must be put in place to evaluate intervention effectiveness. As with other components of the problem-solving process, procedures used to monitor progress vary in their rigor, precision, and comprehensiveness. The important feature of progress monitoring systems is the ability to accurately illustrate progress over time. Typically, the behavior that was used to operationalize the existence and magnitude of the educational problem is used as the indicator of progress in progress monitoring systems. Data are collected multiple times per week, and a pattern of behavior emerges over time, which is often depicted graphically. By using systematic procedures and decision rules (Kazdin, 1982) to examine the pattern of performance the effectiveness of an intervention can be determined. Extensive resources are available on monitoring student performance (Alessi & Kaye, 1983; Kazdin, 1982; Parsonson & Baer, 1978; Shinn, 1989; Sulzer-Azaroff & Mayer, 1991).

At some point during intervention, the magnitude of the problem is revisited. A process very similar to procedures used to identify the initial problem ensues. Student performance is measured and compared to a standard of acceptable performance and a performance discrepancy identified. Two standards of comparison now are available to assist in evaluating the magnitude of the discrepancy. As before, current performance can be evaluated against the criterion of acceptable performance, and the size of the problem can be gauged in an absolute sense. Also, the size of the discrepancy can be evaluated in light of the size of the discrepancy at the time of problem identification.

The program evaluation component of problem solving is analogous to evaluation of hypotheses in scientific inquiry. The intervention provides the basis, and the monitoring and measurement provide the evaluation. Generally, if interventions work in improving performance, an inference can be drawn that the analysis of the problem was accurate (our hypotheses are supported). More precisely, the analysis was sufficient to result in significantly improved performance. In applied practice, this level of support for the analysis is sufficient. For problem solvers, the purpose of their efforts is socially meaningful behavior change. When intervention efforts result in this outcome for clients, universality of hypothesis application is secondary.

IDEA'S PROBLEM-SOLVING EMBRACE

There is a subtle, though important shift in thinking about assessment contained throughout IDEA 97. This shift has yet to receive much attention nationally. Instead it is the "new, high profile" assessment issues that have garnered most of the air time to date. These include the Functional Behavioral Assessment requirements attendant to the discipline provisions and the requirement to include students with disabilities in large-scale state and district assessments. Certainly these changes are timely and important for students with disabilities. They are, however, extensions of historical requirements rather than paradigmatic shifts in the overall direction of the statute.

The more subtle and potentially deeper shifts in IDEA assessment practice reside in other parts of the statute and regulations. They *modify and extend* historical requirements in fundamental ways. Three major changes will be discussed here. The first foundational change stems from the use of a few, carefully chosen words in the section on full and individual assessment. Assessments are now required to contain "functional and developmental" information when students are being assessed for special education entitlement purposes. These terms apply to assessments for all disability conditions included in the law. What these changes mean in terms of practice shifts remain to be seen. Few if any states have fundamentally modified their special education processes based on this language change, so we can only speculate. However, given a read of the entire statute and regulations, it is clear that Congress expects that assessment procedures lend more information to the education process than historical diagnosis and placement information provided. In the context of problem solving, these requirements are met quite deliberately through the problem analysis phase of the process. Assessments are done that contribute to both administrative (i.e., entitlement and placement) and educational decisions (i.e., what and how to teach).

A second shift in assessment requirements is presented in the IEP section of the statute. Historically, IEPs were required to have long-term goals and *measurable objectives*. In IDEA 97, IEPs must contain *measurable long-term goals* with attendant benchmarks or short-term objectives. This shift subtly moves assessment attendant to the IEP process from a short-term measurement paradigm to a long-term measurement model (cf. Fuchs & Deno, 1991). Implications of this shift for practitioners are significant and well beyond the scope of this chapter. At a minimum, however, this change requires IEP teams to document student growth by more carefully selecting behaviors to measure over longer periods of time. Attendant measurement systems will need to have improved technical qualities and be sensitive to relatively small increments of student growth. This second subtle shift raises the bar with regard to another problem-solving decision: progress monitoring.

A third and most important shift in IDEA 97 assessment requirements is statutory language dealing with educational accountability. Part of this shift is embodied by the requirement to include students with disabilities in large-scale assessments. This change is only one small part of the increased accountability requirements. Historically, the special education system has been accountable for processes, procedures, and paperwork. Schools are now accountable for student learning. Students with disabilities now not only must be included in large-scale district assessments but their scores must also be included in the district's composite reporting to their community. Moreover, students with IEPs now must have their progress toward their special education goals monitored and reported out to their parents with the same frequency as students in general education. These changes move IDEA much closer to the outcomes criterion proposed by Reschly (1988). That is, the value of any human service profession, such as special education, ought to be determined by the benefits it confers to the recipients of the services. We now have the mandate to attend to student results, and we have emerging technologies that will allow us to do so. The question facing us all is, Does special education have the resources and the will to turn these new requirements into improved results for students?

SUMMARY

Just as the transition of other philosophically rooted disciplines to science was inevitable at a certain stage in their development, so too is the movement of school psychology toward problem solving. There is simply no other game in town that comprehensively addresses both the structural, procedural, and practice-based challenges that are so widespread in special education. Problem solving is here to stay. Indeed, with each reauthorization of the IDEA, increasing numbers of problem-solving concepts become codified as required practices. As we experience these changes, increasing numbers of broad-based, systemic problem-solving implementations are emerging across the country. In these systems, problem-solving processes are employed at two levels in the system. The first is the individual student level described in this chapter. At a second level, problem-solving concepts are implemented at a systems-level to structure and drive the change process. Not every aspect of problem solving can be implemented initially in any system. So problem-solving thought processes and structures are used to (a) help identify priority areas for change (discrepancies between what is desired and what is), (b) help analyze variables related to the situation, (c) help select components within the system, (d) help implement the changes with integrity, and (e) help monitor the effectiveness of the changes. In essence, the same thinking process can drive change in systems as drives change for students (Grimes & Tilly, 1996; Tilly & Grimes, 1998).

After more than 10 years of implementation of problem solving in Iowa, an uneasy though fair question must be addressed. So, how many problems have been solved? This question brings up a myriad of evaluation design issues, but the short answer is quite a few. Students with disabilities' problems are addressed earlier, more systematically, more collaboratively, and with a high degree of success. The proportion of problems solved is certainly not 100%, however, which leads to the quest for increasingly better solutions for student problems. Problem solving is not a panacea, nor a simple solution. It provides the structure and framework for implementation of current and emerging best practices in psychology and education. If an alternative system emerged that resulted in greater demonstrable benefit for students, we would adopt it. Until that time, however, problem solving remains a most thoroughly thought-through structure to deliver educational interventions to students. It takes time. It takes energy. It takes relearning on the part of nearly everyone. It also results in demonstrable benefits to large numbers of students, which is a foundational reason for school psychology.

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3

Problem Solving as "Best Practice"

Stanley L. Deno
University of Minnesota

OVERVIEW

Successful functioning in any role requires a clear image of the primary purposes of that role. A cursory review of the current literature in school psychology reveals that clarity of purpose is lacking in the school psychologist role (Kramer and Epps, 1991). While the primary purpose may not be clear, the predominant activity of school psychologists is easy to identify. Assessment—with its related ignominious responsibility as gatekeeper for special programs—remains the most conspicuous activity of school psychologists. The problem with restricting the role of school psychologist to that of psychometrician is that many school psychologists have broader training and interests and are eager to make a broader contribution to child and family development. In the present chapter a case will be made that a broader and more satisfying role for school psychologists is that of data-based problem solver.

Fostering Human Development as the Purpose of Schooling

In developing a conception of school psychologists as problem solvers consider first the context within which they work. As participants in school environments, school psychologists are committed to the general purpose of schooling; that is, facilitating human development. This means, of course, that school psychologists will embrace the cognitive, affective, social, and physical developmental outcomes around which schools are organized. Within this framework, the problems to be solved by school psychologists are those generated out of the schools' efforts to promote growth and development.

INTERVENTION

If the purpose of schooling is to foster the development of children and youth, then we can identify the mechanism of schooling as intervention into "natural" (i.e., unschooled) development. The term "intervention" is appropriate in that society has vested educators with the responsibility to organize deliberate activities that affect the course of child development. Without those deliberate activities of schooling the developmental experiences of those students would certainly be markedly different. The term "intervention," then, can be used very broadly to refer to the processes of schooling. Society organizes the schools to redirect the developmental processes that would occur in their absence.

PROBLEMS

Just as the term intervention can be used broadly to refer to the mechanisms of schooling, the term "problem" may be used to refer to the question of how best to attain the specific outcomes of those interventions. Thus, when schools focus their activities on developing literacy and numeracy, the problems to be solved are how best to promote the development of reading, writing, and arithmetic. When schools seek to foster personal and social development, the problems to be solved are how best to promote the levels of development desired in these domains. When students take courses in physical education, the problems are how to best affect the physical development of children and youth. Societal priorities for the outcomes of schooling, then, establish the developmental problems that serve as the focus of intervention.

Given the perspective presented here, problem solving is not a term reserved for activities that focus only on atypical development. Instead, problem solving is defined as the approach to intervention rather than by a focus on failure or deviance. Problem solving is the effort to eliminate the difference between "what is" and "what should be" with respect to student development. Such a difference exists, for example, whenever we consider a student's current level of development relative to a desirable goal. Any discrepancy between where a student is currently functioning and how we might like that student to function at some point in the future automatically provides a focus for problem solving and can be adopted as the purpose of school psychology. Taking such a broad approach to problem solving is also useful because it avoids controversies surrounding a question of whether or not a problem "really" exists. Within such an inclusive definition, the school psychologist is in a position to work both proactively and reactively to facilitate normal development as well as to remediate delays.

The standards-based reform movement in American education is a good example of differing perceptions of the outcomes of schooling. While parents routinely express high levels of satisfaction with the schools their children attend, state legislatures are requiring high stakes testing due to their perception that the public schools are failing our children. Obviously, whether or not the developmental outcomes currently attained by American students are viewed as satisfactory depends upon the standards applied by the person making the judgment. Many of us have experienced situations where we viewed a child's development as being quite satisfactory where the child's parents who wanted more were quite unhappy.

Controversy over whether "real problems" exist can be reduced if we view our work from a developmental perspective where all children and youth are seen to move at an irregular pace along various continua. Any child's current level of performance in some developmental domain always will be the focus of interventions we design to effect whatever movement along those continua we specify, and the purpose of school psychology can be to determine how best to accomplish that movement. School psychologists who conceptualize their work in this way are problem solving whether or not someone identifies a child as developing "normally."

Typical Elements of Problem Solving

While a variety of different perspectives exist regarding the nature of problem solving, three basic elements—formulating the problem, generating and selecting potential solutions, and testing the selected alternatives—are common. The "IDEAL" problem-solving model articulated by Bransford and Stein (1984) illustrates these elements. In that model IDEAL is an acronym for the steps typically required in problem solving: *I*dentify the problem, *D*efine the problem, *E*xplore alternative solutions to the problem, *A*pply a solution, and *L*ook at the effects of that application. In their generic form, these elements can provide the basis for the interventions created by school psychologists.

Types of Interventions

The interventions organized by the schools can be grouped into two general types. The first group consists of the ordinary curricular and instructional experiences available to all children attending regular classrooms in their home schools. These common experiences are intended broadly to affect human development through a general set of experiences that are to be inclusive of all students. This general education program is not focused on the specific developmental needs of individual students and is assumed to benefit students who are typical in their development. A second, smaller group of interventions organized by the schools is specifically focused on the special developmental needs of students who are not developing typically. These special and compensatory intervention programs are not available to all students as are the general education interventions, and they are intended to be much more focused in character.

School psychologists, potentially, work as problem solvers in both general and special programs. In reality, however, the schools generally allocate school psychologist time to problem solving in support of students who are not developing typically. For that reason, the remainder of this chapter will focus on the problem-solving activities of the school psychologist within the context of special and compensatory programs.

The Role of Assessment in Problem Solving

The IDEAL model of problem solving includes the terms "identify" and "look at" (Bransford & Stein, 1984) to refer to the informal processes of sensing and perceiving aspects of the world that constitute the activities that school psychology refers to as "informal" assessment. Despite the fact that these activities are viewed as informal and natural elements of ordinary human problem solving, we should explicitly acknowledge the role played by these informal assessment activities in problem solving. To view the function of assessment as contributing to problem solving helps to develop the rationale for the heavy emphasis given to assessment procedures in school psychology.

Assessment and Measurement Defined

ASSESSMENT

In school psychology, assessment is generally defined as the process of information gathering for purposes of decision making. When conducting assessments, the information gathered can be qualitative or quantitative and verbal or numerical. Information is gathered through a variety of means—highly structured deliberate efforts involving intrusive test administration or informal and naturalistic observation. And, the information is used for a broad range of decisions in education—screening, classification, placement, and intervention evaluation. Narrative reports, anecdotal records, test scores, and coded observational data are all encompassed by the term "assessment." No matter what methods are used to gather information, the key element in assessment is neither the information gathered nor the procedures used, but the decision to be made. Similarly, whenever assessment is used effectively in problem solving, the focus must always be on the problem to be solved. This point is obvious, but it cannot be emphasized too strongly. Professionals who work in bureaucratic systems and are overworked easily become procedurally focused rather than problem focused in their work. That risk is particularly high for school psychologists who necessarily become involved in the paperwork required to provide due process protections to students referred for special education assessment.

MEASUREMENT

In general practice, the terms measurement and assessment are often used synonymously, and while they overlap, some consideration of their relationship is appropriate. Assessment is a broader term than measurement and is inclusive of the information gathering procedures denoted by the term measurement. Whereas assessment includes all types of information gathering and all types of information, measurement is limited to numerical description and representation of observations and, to the extent possible, scaling those observations. Observations designed to "measure" behavior are organized and structured either as tests where the testers set the occasion for behavior, or as observation systems that quantify behavior in natural settings. In either case, the purpose and outcome of measurement is numerical description. Another useful distinction between measurement and assessment is to identify the general purpose of assessment as "informing" and the special purpose of measurement as "clarifying." The increase in clarification produced through measurement occurs by using numerical scales designed to increase the sharpness or precision of the information that is provided. Despite deliberate efforts to increase clarification through quantification in information gathering, some argue that this increased precision is gained at the expense of qualities that cannot be represented numerically (Hesushius, 1991). Indeed, current advocates of "authentic performance assessment" (Darling-Hammond, Ancess, & Falk, 1995) generally eschew the use of conventional measurement approaches for making high stakes educational decisions.

DOCUMENTING IMPRESSIONS

Theories have existed for nearly 50 years that thought directed toward problem solving originates from experiencing cognitive conflict (Berlyne, 1965; Festinger, 1957). In such theories, cognitive conflict occurs when a person perceives a discrepancy between what they desire and what they experience. For professionals working in the schools, cognitive conflict often arises when a difference is perceived between what a student does and what the person would like the student to do. At such times, people respond to the conflict by thinking and behaving so as to reduce the sense of discomfort produce by that conflict. Festinger (1957) termed the process involved in reducing cognitive conflict "dissonance reduction."

If ordinary problem solving originates in the perceptions of the difference between what people want and what they get, then assessment can play a role by verifying or documenting the basis of those impressions. Measurement can be used to clarify the perception of difference between expectations and current reality. Initial impressions are certain to be implicit; therefore, assessment can help to make that experience explicit. For example, the perception that a student is having difficulty learning in school will be based on natural interactions and observations. That perception can be objectified through collecting data on the student's current level of performance and contrasting it with our expectations for that performance. The process of objectifying perceptions rather than simply relying on tests might help to explain the popularity of non-test–based approaches to assessment. Advocates of qualitative approaches, for example, might find naturalistic methods of assessment more appealing because they seem more open to authenticating the intuitive perceptions. Indeed, the term "authentic assessment," though prejudicial in its common usage, most likely underscores the desires of many to document sensations and impressions of broadly observed student capabilities.

CLARIFYING AND DEFINING DISCREPANCIES

A distinction often not made explicitly in problem-solving models is that between sensing and defining. While sensation is an intuitive process, definition is formal and explicit. The distinction can be clearly understood in the difference between the statements "I think something's wrong" and "I wonder what it is." While the former statement is a manifestation of the feeling of discomfort (i.e., "cognitive conflict"), the latter statement directs us to explicitly formulate the conditions that are producing this discomfort. A first step in reducing this cognitive conflict is to clarify and explicitly define the source of our discomfort. To do this requires that we identify the discrepancies observed in our environment.

When we are involved in enhancing human performance, the discrepancies of particular interest to us are those rooted in academic and social expectations. These expectations reveal themselves whenever concerns are expressed regarding a student's current functioning in a particular environment. In such instances, assessment for purposes of clarifying a discrepancy requires that information be collected to document both the current level of student performance and the level of performance desired by whomever is concerned. Careful reflection on this point reveals that a useful assessment of this discrepancy will require as much attention to assessing the standards of performance by those expressing concern (typically, teachers or parents, etc.) as to collecting data on the current level of student performance. Assessing those standards will, of course, require diplomatic and sensitive probing of both subjective and objective dimensions of those standards. For that reason, school psychologists must consider not only the objective dimensions of behavior, such as frequency, magnitude, or latency, but also subjective assessment procedures designed to appraise the perceived importance of a discrepancy.

To illustrate how assessments are conducted to clarify and document the existence of a problem, consider the example of "work completion." To assess a student's current level of work completion we might collect observational data on the percentage of current work being completed by that student during 1 week and find the student's completing between 60% and 70% of that work. We might then explore carefully with the teacher to determine what level of work completion is acceptable and find that the teacher expects "virtually all," say, 90–100%, of the work to be completed. By collecting this information we have established a quantitative difference in performance of 30% between what the teacher wants and what the teacher is getting from this student. At this point, however, we do not know how important that difference is to the teacher. For some teachers a difference as small as 15% between what they desire and what they get is extremely important; while, for others, a difference of 30% is viewed as only moderately important. This distinction between the magnitude of a problem and its perceived importance is the difference between quantification and values. At this point, then, the assessment process must address the even more subjective issue of the significance or "social validity" of the problem, and could require involvement of other significant adults in the student's life and an extension of data collection to obtaining normative peer data.

GENERATING ALTERNATIVES

Once a problem has been identified and established as socially valid, assessments are conducted to aid in selecting from among alternative intervention hypotheses. In conventional terms, some effort is made to differentially diagnose and prescribe a "treatment" that may resolve the problem. Conducting assessments for purposes of developing alternative solutions to a problem, while widely undertaken, is still an uncertain technology. Assessment of this type is organized on the assumption that information from student performance will direct us to interventions that are more effective. The reality is, however, the technology for diagnostic assessment is neither sufficiently reliable nor valid for accomplishing this task. The lack of validated diagnostic assessment procedures is not for generating limited to more traditional differential diagnostic procedures based on standardized ability tests. Research is, as yet, unavailable on the diagnostic utility of currently available observation systems and rating scales that have been designed to describe classroom ecologies. The same can be said for the use of the popular efforts to assess "learning styles" and develop strategies consistent with those styles (Stahl, 1999). And, finally, while a subskill assessment approach makes sense to some, it has been widely criticized as reductionist by those who take a constructivist approach to education (Hesushius, 1991). Special education generally relies on mastery learning approaches built on task analysis and criterion referenced testing. Nevertheless, we might best be advised to expect relatively low-cost benefit ratios from the use of any particular approach to assessment in generating solutions to problems. At this point in the problem-solving process, school psychologists serve their clients better by being thoroughly knowledgeable of broad-based, field-tested intervention research than they do through speculating from currently unsupported diagnostic testing. For example, a thorough knowledge of the recommendations from the National Reading Panel (2000) regarding what is currently known about developing reading proficiency will enable school psychologists to offer more in the way of evidence-based interventions for solving reading problems than will unsupportable speculations from assessment data. Teachers are eager to learn of alternative approaches when current practice is not working. Many school psychologists have learned to play a key role in problem solving through generating alternative solutions in addition to sharpening problem definition through assessment.

DOCUMENTING INTERVENTIONS

It may seem surprising to consider the role of assessment in documenting that interventions are occurring as intended. However, the experience of school-based researchers has established the importance of determining "treatment fidelity" when exploring treatment effects. It is equally clear that we need to assure that problem-solution alternatives have been implemented and are operating with sufficient intensity before we attempt to evaluate their effects. Many of us have had the experience of working as collaborative consultants to identify and plan what seemed to be reasonable potent interventions for solving a problem only to find upon subsequent review that those interventions were only partially or incompletely implemented. In such cases we may not have solved the problem as intended and neither have we established whether the problem could be solved if the intervention had been implemented. If we are to actually test the effectiveness of solution alternatives, then every effort will be made to document that the alternative has been fully and completely implemented and that the student experiences that intervention. It is interesting to wonder how many potentially successful solution alternatives have been discarded because the intervention was never actually tested because of insufficient implementation.

FORMATIVELY EVALUATING SOLUTIONS

In models of evaluation, a distinction is typically made between formative and summative evaluation (Scriven, 1967). The evaluation of a program during its implementation for the purpose of increasing its success is formative evaluation. Summative evaluation, on the other hand, occurs upon completion of a program for the purpose of determining whether or not the program has achieved its goals. The purpose of formative evaluation is to determine the apparent success of an intervention during its implementation so that it can be modified or changed to increase the likelihood that intended results will be achieved. The distinction between formative and summative evaluation is useful within a problem-solving framework because it emphasizes the key role that assessment can play during implementation in informing decisions about how a program can be shaped to increase the likelihood of problem solution.

In the IDEAL problems-solving model, formative evaluation occurs when "looking at" the results of applying a solution reveal that the solution has not worked and exploration for an alternative approach to solving the problem must proceed. The advice, "If at first you don't succeed, try, try again" well captures the essence of both the IDEAL model and the purpose of formative evaluation. Not surprisingly, evidence exists that using formative evaluation of interventions increases their success (Fuchs and Fuchs,1986). Indeed an argument can be made that along with conducting assessment to initially clarify the nature of a problem, assessment as a basis for formative evaluation contributes most significantly to problem solution. For that reason in remaining sections of this chapter considerable attention will be given to the school psychologist's role in formative evaluation of intervention attempts.

DETERMINING SUCCESS

Assessment contributes to clarifying and determining problem solution in essentially the same way that it contributes to initial clarification and definition of the problem. In evaluating program success the same assessment procedures that were used initially to clarify the discrepancy are used to establish whether that discrepancy continues or has now been eliminated. To do this requires the same degree of thoroughness in determining both the degree and importance of any difference between what is desired and what is actually occurring. Following from our earlier example of work completion, this means that we must once again determine the difference in percentage between the student's current level of work completion and the level specified by the teacher. In addition, the teacher's perception of the importance of that difference must be reassessed. In the best of all worlds, no difference will exist. Often, however, we may find that the teacher's performance standards or values regarding the importance of a difference may have changed even while the student's level of work completion increased. Although we may view this as a hurdle in our efforts to solve the problem, evidence exists that "goal ambitiousness" and goal raising by teachers are important factors in increasing the level of achievement attained by students (Fuchs, Fuchs, and Deno, 1985). Indeed, the purpose of school psychology presented at the outset of this chapter was continuous solving of human development problems. While the implication of problems solving is that we may exit a situation when "the" problem has been solved, the ambitions of the teacher (and our own, for that matter) to optimize development often means that "exiting" is a momentary vacation from work rather than a condition of our employment.

Solving the Problems Called Handicaps

In ideal circumstances school psychologists are free to act on the complete range of developmental problems that are encompassed by the work of the schools. In reality, however, most school psychologists are constrained to give priority to problems associated with disabilities. Within the problem-solving framework presented in this chapter, those problems experienced by people with disabilities are called "handicaps." What follows is a set of distinctions among the terms "handicap," "disability," and "impairment" that are useful within this problem solving framework.

DISABILITIES AND HANDICAPS

In 1976, P.L. 94-142 was passed as the Education of the Handicapped Act (EHA). When the revision of that law was passed almost 15 years later as P.L. 101-476, the law became the Individuals with Disabilities Education Act (IDEA). That change from using the term "handicap" to the term "disability" occurred not only in the title, but also throughout the text. The change in terminology could easily be dismissed as an attempt to keep up with the current jargon in special education—that this was simply a cosmetic change having more to do with a shift in form rather than substance. Clearly, however, the people with disabilities and their advocates did not view the change as trivial. Indeed, people with disabilities see as central to their concerns the need for society to understand the distinction between the concepts represented by the terms "handicap" and "disability." We need to reflect on that distinction and its importance in problem solving.

HANDICAPS AS PROBLEMS

A useful beginning to defining "disabilities" and "handicaps" within problem solving is to classify as handicaps the particular set of problems that the schools are attempting to solve through special education. From this perspective, handicaps are viewed as the difference between what someone does (or can do) in a particular situation and what is required of that person to be successful in meeting the demands of the situation. In common experience, a person who can use a wheelchair to move about in the environment is not handicapped until required to gain access to a building that has only steps at its points of entry. In a similar fashion, someone who has low visual acuity is handicapped when the option for gaining necessary information is to see words projected on a screen or written on a chalkboard. Finally, a high school student who cannot read and must do so to complete daily assignments is handicapped. What is clear in each of these examples is that a discrepancy exists between what the individual can do and what the task demands to be successful. What should further be made clear at this point is that the term "discrepancy" used in the present problem-solving model differs from its use in the context of common definitions of learning disabilities. In the definition of learning disabilities the term "discrepancy" refers to a difference within the individual between an ability test score and an achievement test score. In the problem-solving model presented here, the term "discrepancy" refers to a difference outside the individual—the difference between the level of performance required to meet environmental demands and the level of performance emitted by the individual.

DISABILITIES AS INDIVIDUAL CHARACTERISTICS

Whereas handicaps are conditions created by the relationship between what the individual can do and what must be done to succeed at a particular task, disabilities are conditions of the individual. In each of the examples provided above the "disability" is that characteristic of the individual's performance that does not match the demands of the environment in that situation. The performance characteristic of an individual is commonly termed a "disability" when the performance is substantially different from the typical performance of one's peer group. Given this perspective, disabilities are defined by the normative differences in performance while handicaps are defined by the mismatch between the person's ability and the minimum standards required for successful task completion in a particular situation.

Another important distinction between disabilities and handicaps is the degree to which the existence of the condition can be altered by changing the environment. As was illustrated in the foregoing examples, changing the environmental demands could eliminate each handicap. If wheelchair access to a building is created, the handicap no longer exists. If large print paper copy is provided at the student's desk, then the notetaking handicap no longer exists. If the information required to complete daily work assignments is made available through audiotapes, then no reading handicap exists. In each of these examples altering task demands can eliminate the handicap. The same cannot be said for each of the disabilities. In all three cases, the individual's level of performance (i.e., walking, seeing, and reading) is unaltered by the modifications made to enable successful task completion; nor could anything be done to immediately alter the individual's capability. Normatively defined disabilities change only when the individual's performance capability changes or the performance of the norm group changes. As also is evident from the examples, the handicap is immediately eliminated when the environment is modified in such a way that the requirements are congruent with the person's performance capabilities.

The role that norms have played in defining disabilities has been clear for quite some time. What has been less clear is the role that society plays in creating the handicapping conditions. Even in acting as a caring society we have tended to view handicaps as problems possessed by the individual with which we might help them to cope. By changing the language of the law from handicap to disability, advocates for people with disabilities have attempted to influence us to think more completely and carefully about our role and responsibility in creating handicaps. They question the morality of a society that creates requirements for task success based only on the capabilities of the majority while ignoring the capabilities of people with disabilities. Beyond that they question the assumption that those who cannot fulfill requirements based on the standards of the majority must bear full responsibility for their lack of success.

The handicapping conditions created by the schools are many and not always easily identified. Many students struggle to read text but must read extensively to earn top grades. In a general sense, all students with reading deficiencies are handicapped when the difficulty level of classroom reading requirements set by their teachers exceeds their current reading ability. The same can be said for students who do not write well or compute fluently. Disability advocates have done all of us a service by heightening our awareness that the common standards for performance that we create in the schools contribute as much to creating the problems to be solved as performance characteristics of the students who cannot meet those standards. Having been made aware of this issue, the question that we must keep foremost in our setting of standards is whether they are appropriate for all students or only for the majority.

A third, important, concept related to disabilities and handicaps is the concept of impairment. In the present discussion, the term "impairment" is used to refer to a biological dysfunction or anomaly. Impairments may, or may not, be related to the level of an individual's ability or performance. Spinal nerve damage is an impairment that can affect the level of an individual's ability to walk. Similarly, damage to the optic nerve or the retina may be a biological condition underlying or affecting visual perception, and damage to auditory mechanisms may result in lowering an individual's ability to discriminate speech sounds. Historically, our legislatures have written laws on the assumption that disabilities in performance were caused by specific and identifiable impairments. Indeed, many disability advocates argue that all disability conditions funded through federal law should be clearly based in biological anomaly. This line of reasoning has proved particularly problematic for conditions such as learning disability, emotional disturbance, and mild mental disabilities where impairments are difficult to identify. The need to identify impairment is served by current research to map the brains of people who are "dyslexic" using advanced electronic techniques such as PEP scans and magnetic resonance imaging. The hope is that such research will not only result in the development of appropriate treatments, but also will establish that impairment is at the basis of the disability. The fundamental belief undergirding this approach is that special education resource expenditures will be justified if anomalies can be identified in the brains of individuals who have difficulty learning to read. With respect to serious emotional disturbance, however, it has been thus far both conceptually and procedurally impossible to identify a biological basis for the disability.

While fairly clear connections can be drawn between some biological conditions and specific levels of competence, the relationship between the biological condition and the level of functional performance obtained by the individual is typically not direct and is always very complex. When central nervous system trauma occurs through closed head brain injury or spinal cord injuries, the degree to which an individual will lose or recover functioning associated with those injuries is difficult to predict. While this is due in part to difficulty in estimating the degree of healing or damage, it is also because the central nervous system is able to adapt in ways that produce improved functioning even when impairments exist. Considerable evidence exists that when the dominant cerebral hemisphere is traumatized the less dominant hemisphere will take over some of the functions normally associated with the dominant hemisphere. The same difficulty exists when attempting to estimate the performance consequences of sensory impairments. Audiometric and opthamological examination cannot fully ascertain the degree of useful hearing or vision. Legal classifications of blindness that are based solely on sensory acuity often result in the apparently contradictory situation where someone who is "blind" can read ordinary print. Further, while some students who are classified as hard-of-hearing can complete their schooling without the use of technological aids or compensatory programs, others have such great difficulty developing oral language skills that they are more likely to succeed in a residential school where communication occurs through American Sign Language.

In summary, in the problem-solving framework provided here, disabilities are conditions of the individual that refer to the fact that their level of competence, performance, or ability to do something is consistently and significantly lower than that of their peers. In contrast, impairments are biological conditions of the individual believed to underlie an individual's apparently unalterable disability. Handicaps are conditions that exist when successful functioning in an environment requires a level of ability beyond that possessed by the person. A neat, simplistic formulation of the relationship among these three terms is that biological impairments produce disabilities that often result in the occurrence of handicaps. While many relatively simple and straightforward examples of this formulation exist, the functional relationships among these three terms are typically very difficult to establish.

SEVERITY OF DISABILITY

No discussion of disabilities and handicaps is complete without consideration of the degree or severity of these conditions. Earlier in this chapter the magnitude of a problem to be solved was described as having two parameters: its measured or objective dimension and its reported or expressed values dimension. The same two parameters apply to the concepts of disability and handicap. The objective or measured severity of a disability refers to the scaled difference between the individual's performance on a particular task and the typical performance of the peer group.

If we present students with text passages from the local newspaper and ask them to read those passages aloud for a minute, they will differ with respect to the number of words they read correctly and incorrectly. If we do this for a representative sample of students at the same age, we will find that the scores will be distributed from relatively lower to higher levels of accurate production. Further, the distribution of these scores will approximate normality, and we will be able to consider the scores as points along a continuum. The differences in individual performance on this particular task are interpreted to represent differences in underlying reading ability and are considered to be an objective measure scaling of that ability. Although some students consistently obtain a very low score on this task, the low score, alone, does not establish the existence of a disability. To establish a particular level of performance as disabled requires that standards be set for what is considered to be "normal" performance. Performance standards are external to the task itself; that is, nothing about the task itself establishes normality or importance. The number of words read correctly and incorrectly is only a fact about performance until a framework for interpretation is created. The most common standards for interpretation applied to human performance, of course, are normative. Teachers usually acquire informal normative standards through working with their students. These informal standards account for the fact that teachers judge some students to be "able" when performing a particular task because they are performing similarly to students of comparable age. Other students are considered to be "exceptional" if they perform much better or worse. In the present context, the students who perform well below the teacher's standards for normal performance are thought to be less able or, possibly, disabled. Since teachers vary in their experience and their personal standards, efforts are made to standardize the criteria by which performance is to be classified as disabled. Indeed, to be able to establish consistent criteria for judging performance through the use of norms is one of the most important contributions of standardized tests to education.

While norms provide a useful basis for objectively discriminating between levels of performance, and thereby help to establish degrees of ability and disability, they are not sufficient to establish the social significance of low levels of performance on a task. The value of performance on a particular task derives from the need for competence at that task within the culture. For example, being able to read words with the same speed and accuracy as one's peers only becomes important when the personal and social consequences of performance on that task are important. Thus, performing more than two standard deviations below the mean at "singing in tune" is objectively quantifiable, but it is not identified as a severe disability in our American culture. The same cannot be said for similarly low performance in reading and writing.

SEVERITY OF HANDICAP

Like the severity of disabilities, the severity of handicaps is defined both objectively and subjectively. The measurable and the expressed value dimensions of handicaps are not identical to those of disabilities, however. The performance aspect of a handicap may be measured in the same way as a disability; however, the standard for successful performance may be established quite differently. Recalling that disabilities are most often defined on the basis of performance relative to norms, the performance standards or requirements that established the existence of a handicap may be established independently from current norms. This distinction is well illustrated whenever the media claim that a crisis exists with respect to the performance of American students in math and science. If we apply only normative standards to evaluating the performance of students in the United States we could argue that nearly 85% of the students will be performing within the normal range (i.e., at a level equal to, or greater than, one standard deviation below the mean). Despite this, U.S. policy makers are urged to view normative performance as insufficient and to set a higher standard. If we were to apply only normative standards to evaluating the performance of students in the United States we could argue that nearly 85% of the students will be performing within the "normal" range (i.e., at a level equal to, or greater than, one standard deviation below the mean). Despite this, U.S. policy makers are urged to view normative performance as insufficient and to set a higher standard. As the argument goes, setting "world class" standards will enable American students to compete in the world marketplace. While an empirical basis typically does not exist when higher standards are set, it is assumed that higher standards are both possible and desirable. Under any circumstances, the standards that are set are clearly not normative. More common examples of how non-normative standards are imposed to create handicapping conditions can be found in the examples of parenting. A parent may establish that a son or daughter must attain a particular grade point average to drive the car. The son or daughter may already be performing "normally," but the parent may desire or value a higher standard of academic success. This standard is derived from the values of the parent without particular reference to normative grades. Without arguing the merits of setting higher standards, it is clear from these examples that, unlike disabilities, the severity of any handicap will be determined by something other than deviation from typical performance.

CONSEQUENCES AND HANDICAPS

Handicaps can also be distinguished from disabilities because handicaps inevitably are associated with contingent consequences. What this will mean for the individual is that the outcomes will differ when performance is, or is not, consistent with the environmental demands. In the earlier illustration of wheelchair accessibility to a building, the goal of building entry (for attending classes or going to work, perhaps) is either achieved or denied. Thus, not only does loss of access to the building occur when the environmental conditions are beyond the individual's level of performance, but the loss of rewards associated with employment or attending classes in that building also occurs. The parent who set the higher grades standard for using the car has created the incentive consequences related to student performance. If the parent establishes a grade criterion that consistently exceeds the student's capability, then failure will result in loss of an important incentive for the son or daughter. Those low performing readers described earlier who cannot read their subject matter texts well enough to do their daily work are not only disabled but are handicapped. The handicap exists not simply because the requisite performance standards exceed their current capability, but also because in failing to attain those standards they will not achieve the desired grade outcomes. The severity of a handicap, then, is based both on the magnitude of the discrepancy between what the individual can do and what the task requires, and the magnitude of the incentive consequences associated with that discrepancy.

RELATIONSHIP OF HANDICAPS TO PROBLEM SOLVING

It should be clear from the foregoing discussions that the definition of "handicap" parallels the definition of "problem" developed at the outset. Problems are defined as the difference between the performance we want in a particular situation and the performance we get in that situation. Handicaps are a particular type of problem where we create environmental demands that exceed a person's current capabilities and the associated incentives for meeting those demands. Certainly, not all handicaps are treated equally within public policy. In particular, the handicapping conditions addressed through public law and special education are those we create by imposing conventional standards for performance on individuals whose performance in that area is disabled. Public law mandates that the problems of this type (i.e., handicaps for people with disabilities) be solved through accommodations within school and community settings.

BEST PRACTICES IN SOLVING HANDICAPS

Identifying and Defining the Problem

As with problem solving in general, solving the problems called handicaps requires cycling through the process of identification, definition, exploration of alternative solutions, implementation of selected solutions, and evaluation of the effects.

PROBLEM DEFINITION: THE KEY TO SUCCESS

Perhaps the most significant contribution that school psychologists can make to solve handicap problems is their collaboration with others to clearly and explicitly define the problem to be solved. This collaboration requires skill in working sensitively with others who have either created, or bear responsibility for meeting, the environmental demands that define the handicapping conditions. As noted earlier, clarity and precision in problem identification and definition are essential to successful problem solving. School psychologists are (or should be) uniquely capable of increasing clarity and precision by applying their knowledge of assessment. In this first step of problem solving, school psychologists can significantly contribute by helping to develop and select assessment procedures that aid in precisely defining both the individual's current level of ability and the environmental demands in excess of that ability.

School psychologists collaborating to clarify existing discrepancies must be particularly sensitive to the values at the heart of the performance standards. No assessment procedure alone will be sufficient to establish the existence of a handicap. They must emphasize that, at best, standardized tests scores reveal the performance differences that aid in defining disabilities rather than handicaps. Alone, these scores do not prove that a problem exists that must be solved. Differences within the norm group on a particular test are meaningless until the values context associated with the performance on that test is clearly explicated and agreed upon. As we shall see later, this issue also becomes important in attempting to establish both the need for special education and the annual goals for an Individualized Education Plan.

CULTURAL IMPERATIVES

When attempting to collaborate with others in examining the value context surrounding handicaps, the idea of cultural imperatives is useful for identifying the handicaps that are sufficiently important to be addressed by a society and those that are not. For our purposes here, cultural imperatives are those types of performance so valued by a society that school standards are set for that performance and resources are allocated to overcome developmental discrepancies in those areas. In America, for example, we allocate considerable resources to support learning to read, write, and compute. The high priority placed on competence in these domains is easy to infer simply by examining both the daily schedules of lessons and the curricula of the schools. Not only do the learning activities in these domains occupy prime time in the school day, but when students have difficulty in learning these tasks additional resources are used to develop remedial and compensatory programs to assure literacy and numeracy. Further, both federal and state policy initiatives have been created to assure that American students excel in these areas.

Cultural imperatives are easily understood when contrasted with cultural electives. Cultural electives are those abilities that, while valued by society, are given lower priority for resources than cultural imperatives. Musical abilities are good examples of a cultural elective. Students are often given the opportunity in school to develop some degree of competence in music; however, relatively small amounts of time in the schedule are provided and, when resources are short, music is among the first to be cut from the school curriculum. Indeed, while we may think of someone as not very musically inclined, we are unlikely to refer to the individual as "musically disabled" or handicapped. While a performance discrepancy in music may be as large as it is in reading, no additional societal resources will be forthcoming to overcome that discrepancy. Clearly, it is the difference in value vested in these activities within the culture that establishes that one disability is important and the other is not. Further, the magnitude of the incentive consequences associated with culturally elective handicaps is typically very small.

SITUATIONAL HANDICAPS AND CHRONIC DISABILITIES

A second set of concepts that is useful in making problem priority decisions is the distinction between situational handicaps and chronic disabilities. In the foregoing discussion we can see that handicaps might exist in any situation and for only a moment in time. That is because, as members of society, we create handicaps whenever we establish standards for performance that someone cannot meet. As pointed out earlier, handicaps are often created for people whose abilities are normal. Distinct from these "situational handicaps" are "chronic disabilities." Chronic disabilities are trans-situational and enduring. An otherwise typical student, or group of students, can have great difficulty meeting the performance demands of a teacher because the teacher's work demands are not appropriate to their level of skill. This problem is quite different from the conditions for a student who has serious difficulty in learning to read for several years, regardless of the teacher, and is routinely handicapped in school. In the former case the handicap is situational, while in the latter case the disability is chronic. In both cases discrepancies exist between what the individual can do and what the individual must do in order to succeed, but in the case of situational handicaps the problems are relatively temporary or local. Students with chronic disabilities encounter handicapping conditions where they must endure the consequences of failing to meet socio-cultural demands.

The distinction between situational handicaps and chronic disabilities is fairly obvious. At the same time, keeping the distinction in the forefront preempts questions regarding the priority that must be given to different discrepancies when selecting problems. Ultimately, the value system that underlies resource allocation and the rules related to those values would determine the priority among problems to be solved. As will be discussed later, however, the funding provided for solving special education problems is intended to assist those people whose disabilities are chronic rather than those with situational handicaps. This will mean that school psychologists will have to develop assessment procedures that can aid in distinguishing between problems that are situational and those that define the individual as disabled. As before, norms are useful tools in making this judgment because they emphasize individual differences in ability rather than failure to meet societal standards.

PROBLEMS AS RELATIONAL

A point often overlooked when defining and selecting problems as differences in expected and actual performance is that problems do not exist within the individual. This point was made earlier in distinguishing the use of the term "discrepancy" in the problem-solving model presented here and the common use of the term "discrepancy" when defining learning disabilities. In the model presented here, problems are defined by the discrepancy between an individual's performance and the level of performance that must be attained in order for the individual to be successful in attaining the associated incentive. At the same time it is important to point out that problems do not reside in the standard or level of performance that is desired. Using the discrepancy model clarifies that the problem is relational—that it resides in the relationship between individual performance and environmental demands. A problem may well exist when a student's reading skill is insufficient to accurately complete daily work assignments. To attribute the problem to the student's lack of reading skill or to the standards of performance set by the teacher is neither necessary nor helpful in problem identification and definition. Sensitivity to this issue helps to avoid blaming the victim—either the student or the teacher.

PROBLEM OWNERSHIP

While defining problems relationally helps to avoid concluding that someone *is* a problem, it is useful to identify who *owns* a problem. Ownership of a problem can be determined by identifying those individuals who view a performance discrepancy as being important and who are initiating action to solve the problem. As we identify problem ownership, we need to be mindful that problem owners are not only those who have established performance standards that a student cannot meet but also those who share a concern when a particular discrepancy exists. For example, a classroom teacher may be relatively unconcerned when a particular student cannot do daily assignments accurately, believing that low ability makes this inevitable. Likewise, the students may have come to accept failure as a part of the student's life. Parents, however, may be deeply concerned and may press the school for adaptations in their children's program. In such cases it is neither the parent's performance nor the daily work standards that define the problem, but the fact that the parents initiate action to solve the problem means that they are the owners of the problem. To paraphrase a well-known expression, "problems exist in the eye of the beholder." Once this is understood, it becomes clear that it is the owner of the problem whose desires and concerns must be made explicit to clearly identify and define a discrepancy and to establish its importance. Practically speaking, teachers and parents own most common school problems. They are most often expressing concern and taking action. Although it is tempting to identify the students as owning the problems, this typically is not the case.

DEFINING DISCREPANCIES QUANTITATIVELY

When a teacher uses language to express a concern over a performance discrepancy, the terms used are typically qualitative rather than quantitative. Thus, for example, a teacher might express concern by saying that a student is having "difficulty in reading"; and, when asked for more details, might say that the student is "unable to complete his independent work accurately." In attempting to clarify this problem we are confronted with the fact that the teacher's initial statement implies that the student has a skill deficiency in reading while the second statement points to a different type of performance; that is, "doing work accurately." While discrepancies may exist both in reading skill and work completion, and while failure to complete work accurately may be due to a reading disability, assessment of a difference between what the teacher wants and what the student does requires scaling performance along the same dimension. Thus, the student's "reading difficulty" needs to be operationalized, and the teacher's expectations need to be expressed in the language of that operationalization. In this case, careful probing may yield specific information regarding the reading book or books that are being used for instruction and the level of reading skill that is necessary to performing acceptably in those reading materials. Further exploration might result in finding that the teacher expects the student to be able to read from a fourth-grade literature book with approximately the same speed and accuracy as the average student in the class. The quantitative difference between the teacher's performance expectation and the student's actual performance in fourth-grade literature could then be obtained by using the Curriculum-Based Measurement (CBM) (Deno, 1985) approach to scaling reading differences. Using CBM involves comparing the student's performance to a normative sample of the class to determine the difference in the number of words read correctly by the peer sample and the target student. The result is a direct representation of the reading discrepancy along the same quantitative dimension—number of words read correctly in 1 minute. If, instead, the teacher seeks to define the problem in terms of work completion, an observational approach to assessing the discrepancy in terms of percentage of work completed could be accomplished (Deno, 1980).

Skill development problems, by definition, are discrepancies where the teacher's performance expectations exceed the student's level of performance. At the same time, this does not mean that the discrepancy always is one where the student's performance is lower than the performance the teacher desires. Behaviors that are deemed inappropriate or incorrect often occur at a level higher than that desired by the teacher. These "intrusive" behaviors include such things as high error rates in reading, spelling, and computing. They also include high levels of social behaviors like hitting, making noise, or being out of an assigned place. Whether the performance discrepancy is one where the actual performance is perceived to be too high or too low relative to the teacher's standards will not alter the basic utility of defining the problem in terms of quantitative rather than qualitative difference.

In closing this discussion of problem identification and definition, it is useful to once more emphasize that the key to successful problem solving is careful identification and definition of the problem. When problem-solving efforts are mobilized, available resources will move to the specified problem. Inaccurate or inappropriate problem selection will mean that the resources will be mobilized to solve the wrong problem. Unfortunately, after implementing a problem solution it is all too common to find that the owner of the problem expresses dissatisfaction with the results, not because the intervention plan has failed but because it has been focused on the wrong problem. In such cases the owner of the problem continues to be concerned because the discrepancy that had been eliminated was not the essence of the problem owner's concern. To avoid this outcome, we must be careful not to require teachers to define discrepancies in our preferred terms. The CBM approach described briefly above has proved useful to defining reading problems. That approach uses discrepancies in the speed and accuracy of a student reading from fourth-grade literature. We must be mindful that in using this approach to assessment we may be overlooking a problem of higher priority to the teacher. In the previous example, the discrepancy between the work completion rates of the student and the teacher's desired level of work completion may be of greater concern to that teacher. While we may be more interested in focusing on reading skill problems, the teacher may place higher value on developing good work habits. In such a case we might solve our preferred problem, but not that of the teacher.

Developing and Selecting Alternative Solutions

Once problems have been carefully defined it is possible to proceed to generating alternative plausible solutions for reducing the discrepancy. Since most school-based performance problems involve skill discrepancies, it is common to assume that developing student skills best solves most problems. Indeed, improving skill development is the goal of school programs. Nevertheless, we should remember that problems can also be solved by adjusting performance requirements in line with individual student capability. Particularly in the case of those problems called handicaps, changing performance is always more difficult than altering the environmental conditions necessary for success.

Discussions of whether to seek problem solution through changing performance or adjusting requirements are fraught with potential controversy and must be handled carefully. In most instances this will mean that the owners of a problem must become engaged in a constructive discussion of the relative benefits and costs likely to be incurred through modifying the performance or changing the environmental demands. Central to developing and selecting problem-solution alternatives should be the idea that discrepancies can be reduced by alterations in the performance, alterations in the task requirements, or by alterations in both the performance and the requirements for success. Within a problem-solving framework, a problem is eliminated when the owner no longer deems a discrepancy to be important. Either adjusting task demands to meet current student capabilities or moving performance standards to be congruent with current performance results in problem solution. As problem solvers, eliminating the discrepancy through either approach provides us with some satisfaction. At the same time, our professional responsibilities as school psychologists requires us to consider the moral obligations associated with the long-term consequences of a particular solution for the student. If lowering standards for performance solves the immediate problem, it might not be helpful to the student in the long run. This issue, of course, relates to the phenomenon of "goal ambitiousness" discussed earlier in this chapter.

DIAGNOSIS: AN UNDEVELOPED TECHNOLOGY

When a decision is made to solve a problem by improving student performance rather than by adjusting task demands, school psychologists are often called upon to conduct testing for the purpose of diagnosis. The intended outcome of diagnostic testing is, of course, a plausible explanation for the student's performance and some recommendations for intervention. In the case of chronic disabilities the diagnostic question focuses on why students are performing at a level significantly lower than their age norms and what techniques should be used to address the performance problems.

Despite the widespread use of diagnostic procedure, it is important to realize that, in the language of cognitive psychology, problems are "situated"; that is, they are defined by the specific circumstances in which they exist. Since problems are situated, their solutions also are situated. The situated nature of problems and their solutions means that success in problem solving increases with increased specificity of our knowledge concerning a problem. In most cases problems are so specifically situated that generic diagnosis is virtually impossible. The problem of situation specificity in diagnosis may well be why a reliable and valid technology of differential diagnosis and prescriptive treatment has never developed (Watkins, 2000; Deno, 1990; Snow, 1989; Arter & Jenkins, 1979). Unfortunately, a popular literature exists that learning problems can be overcome through greater attention to individual differences in "learning styles" (Snider, 1992), and school psychologists are too often cajoled into "going beyond the data" when meeting with others to solve problems.

PROBLEM SOLVING AS EXPERIMENTING

More than 30 years ago, Donald Campbell (1969) advised us in his presidential address to the American Psychological Association that we should treat "reforms as experiments." His thesis was that, since the outcomes of new or renewed programs were always unpredictable, we need to recognize that implementing them was a hypothesis to be tested. A similar view of problem solving can be extended to work in the schools. When we introduce changes in programs we need to be public that the effects of those changes are uncertain. For that reason, we must collect data in such a manner that the effects of program changes can be determined. As problem solvers, taking a hypothesis-testing approach enables us to avoid being trapped into the position that the changes we are proposing will certainly be effective. Psychological knowledge, at best, can only help us to estimate probabilities. Like the National Safety Council's predictions regarding the number of people who will be fatally injured in auto accidents during a holiday weekend, our generalizations about the effectiveness of programs are more accurate for groups than they are for individuals. Knowing that an intervention strategy has had a 50% success rate in influencing student behavior may help us to increase the chance of selecting a successful strategy, but we still cannot be very sure that the intervention will be effective in solving a particular problem. In our efforts to solve problems through modifying student programs we should avoid being trapped into acting as if we know with certainty that a particular intervention will solve a specific problem. We would be wise to encourage others to view our proposed solutions as operational hypotheses that can, and should, be empirically tested. By doing so we encourage the development of assessment procedures that are problem specific and produce data that aid us in evaluating our problem-solving efforts.

Progress Evaluation

A critical issue that arises when we seek to approach interventions in student programs as experiments is the method to be used for empirically testing the effects of those interventions. The most common method used in education to evaluate programs is an arrangement where students are pre-tested prior to implementing a program change and then post-tested at program completion. Pre-testing is used to create a snapshot picture of the initial difference between actual and expected performance, and post-testing provides a similar static picture at the completion of an intervention that aids in determining whether or not the discrepancy still exists. While pre-post–test arrangements make an important contribution to evaluating our problem-solving success, it actually constitutes a weak set of conditions for making valid judgments about the effectiveness of interventions (Campbell and Stanley, 1963). Recent developments in procedures that can be used for monitoring individual student progress now provide an alternative to pre-post–testing arrangements.

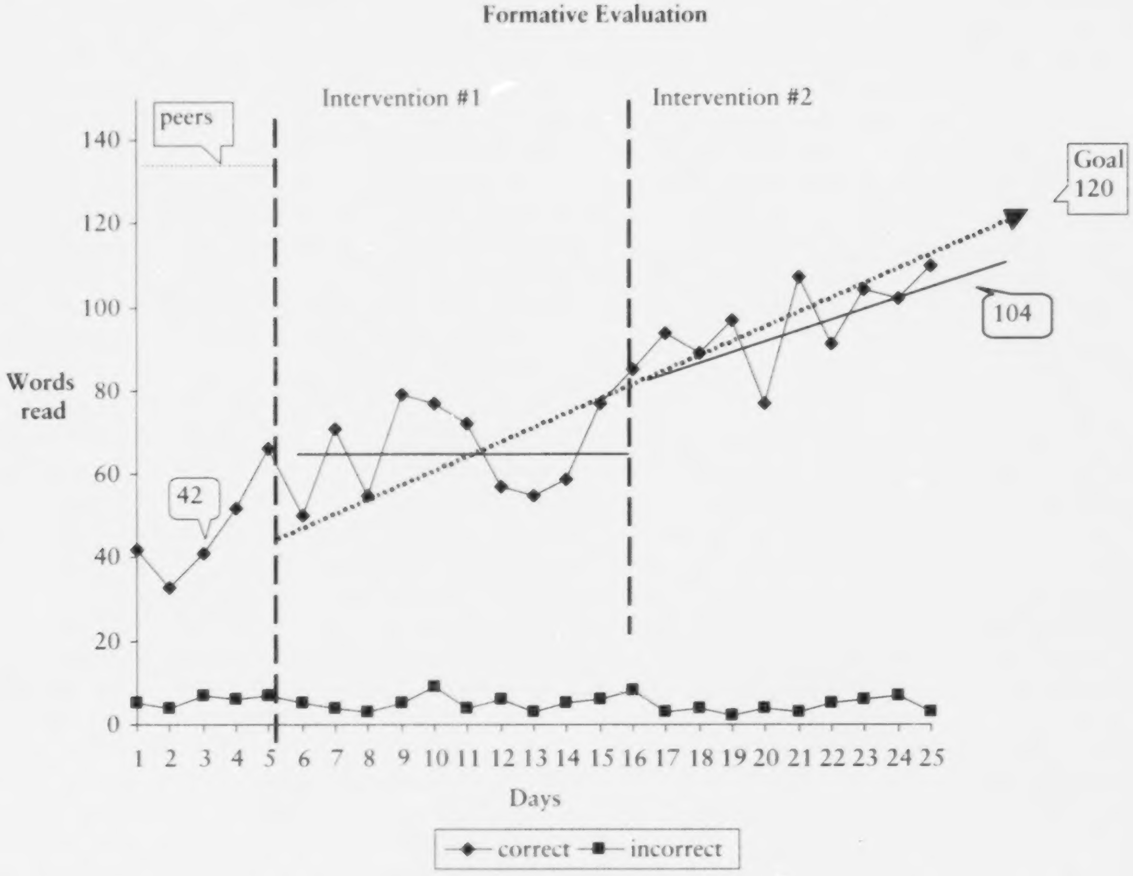
PROGRESS MONITORING

In general, procedures for individual progress monitoring are based on direct and frequent observation of performance on the tasks or in the situations that represent the essential outcome of the intervention. Repeated measurement of performance occurs before, during, and at the end of interventions producing a series of data points across time. The time series data enable us to make the usual estimate of current performance level available through single occasion testing, but it also enables us to estimate trends in performance before and after intervention, and changes in individual variability. Estimates of trend and variability prior to program reform are derived from repeated measurements to establish a baseline for these characteristics. Trend and variability in individual baseline performance are then combined with initial level to create a stronger database for testing intervention effects. Evidence exists that when individual progress monitoring is used in a formative evaluation design, intervention effectiveness can be increased (Fuchs and Fuchs, 1986). The most probable explanation for this increased intervention success is that the empirical records of intervention effects are continuously available for use in deciding whether a program is producing intended effects and should be continued, or is ineffective and should be modified or abandoned.

An illustration of how individual progress monitoring can serve as an aid to testing successive intervention attempts is presented in Figure 1. As can be seen in the figure, the progress monitoring data reveal that initial effort to improve the student's reading performance was relatively unsuccessful and that an alternative approach to teaching the student to read was needed. After a series of trials, a collaborative program involving direct instruction was created and the trend in the student's reading performance shifted upward.

Such a graphic record is important because it clarifies many things for decision makers. First, it clearly represents the difference between the student's initial level of performance and the standard of performance desired by the teacher. Second, by projecting the trend from the student's baseline performance to the goal date at the end of the graph, it is possible to estimate the magnitude of the difference that would be obtained on the goal date if no program reform occurred. Third, when the rate of growth in performance required to attain the desired level on the goal date is drawn on the graph, it provides continuous feedback on progress toward the goal. Finally, the degree of program improvement produced by each successive reform can be estimated by contrasting the performance trends produced during successive reforms. This more dynamic picture of performance

Figure 1. Progress monitoring graph for reading



in relation to changes in student programs, then, creates a richer database for formatively evaluating program reforms than is available through pre- and post-testing of individual student performance.

PROGRESS INDICATORS

As with any effort to base decisions on measures of performance, successful use of individual progress monitoring necessitates that the data used for decision making validly represent the goals of program intervention. Unfortunately, despite widespread interest in assessing educational outcomes, very little agreement exists regarding the data that are reliable and valid indicators of the culturally valued outcomes of schooling. In the absence of a research basis for indicator selection, "authenticity" (Wiggins, 1993) and "social validity" (Wolf, 1978) are currently the most highly touted characteristics of data on program outcomes. While these characteristics are not well defined, the essence of authenticity seems to be that individual performance on tasks that are "real" and "meaningful" be observed as a basis for appraising competence. While this concept is laudable in the abstract, efforts to operationalize authenticity encounter both technical and logistical problems. Nevertheless, good reasons exist to consider the authenticity of the tasks on which we appraise performance. Perhaps authenticity can be partly assured through establishing social validity; that is, the degree to which significant others in the individual's environment agree that the data to be collected represent the important treatment goals.

When authenticity and social validity are used as criteria for evaluating the use of standardized achievement tests it is easy see why they have been subject to so much criticism. A standardized reading achievement test, for example, might include a variety of paper and pencil tasks such as recognizing isolated words, selecting definitions of words, and selecting multiple choice responses relative to the content of short segments of text. While ample psychometric evidence may exist for the reliability and validity of the data produced through measures of student performance, such tests are criticized on the grounds that the tasks are not authentic; that is, that they are not what people do when reading. An argument can be developed that a more authentic reading task involves sharing or communicating reactions or feelings in regards to the content of a story. If so, then assessment should be structured around the social and communicative aspects of the reading experience rather than around arbitrarily selected words and questions from a text that was not selected by students out of their own interests.

In contrast to authenticity, determining the social validity of such a standardized test is based on the values of those invested in student performance. If they are less interested in scores on such a test than whether the students are using their reading skills to successfully complete relevant school assignments, then the socially valid information would be student performance on school assignments rather than their scores on the standardized test. We should remember, however, that social validity is based on shared values rather than independent judgments of authenticity. For that reason it is possible for performance on such a standardized test to be judged as socially valid but not authentic.

Another important set of characteristics with respect to useful progress indicators relates to practical and logistical concerns. If frequent measurement of progress is useful for ascertaining intervention effects, then assessment procedures must be efficient and economical. That is one reason why the administration of commercially developed achievement tests cannot be used in frequent progress monitoring. Frequent monitoring also necessitates that multiple equivalent forms be used so that practice effects on the test itself do not accrue. Thus far, direct observation and recording of relatively brief performance samples embedded within the context of ongoing classroom activities has proved to be the most practical and logistically feasible solution to these problems (Deno, 1997).

APPROACHES TO DECISION MAKING

Evidence has accumulated that program reforms are more successful when systematic data decision rules have been used to make program improvement decisions (Fuchs & Fuchs, 1986; Fuchs, Fuchs, & Deno, 1985). The research in this area reveals that people will collect data on the existence of a problem and then monitor progress toward goals, but tend not to use the data to make timely changes in unsuccessful interventions. Indeed, this failure to modify programs in response to performance data has been identified by program administrators as the primary barrier to effective system level implementation of CBM procedures in special education programs (Yell, Deno, & Marston, 1992). At least two approaches to overcoming this barrier are available and may be effective.

The first solution to getting interventionists to use progress-monitoring data is to use computer technology to prompt responsiveness to the data. In this approach a structure is created for determining when and how a program might be modified to increase the likelihood of its success. Evidence indicates that the use of such a technology does, indeed, result in more effective programs (Fuchs, Fuchs, Hamlett, & Ferguson 1992). The second solution is to devote greater resources to developing and supporting professional practices consistent with effective use of progress monitoring data to solve problems. This will require preservice and inservice training and accountability systems that encourage effective use of progress monitoring to formatively evaluate efforts to solve problems. As a relatively new practice, a data-based approach to problem solving must evolve as part of the natural practice of school psychology. As with any evolutionary outcome, the behaviors that become the "best practices" of school psychology will be determined by the degree to which those practices are adaptive for school psychologists. If survival in the culture of the schools requires the effective use of data-based problem solving, we can predict that school psychologists will successfully adapt to that culture and will learn to use effective data-based problem-solving procedures. System developers and managers must look to themselves if they want to identify the source of motivation for best practice.

SUMMARY

The foregoing discussion has focused on the role of the school psychologist in solving special educational problems. Specialized training in assessment enables school psychologists to play a key role in creating the database for effective problem solving. To do so, however, requires that they have a clear conception of the problem-solving model and their role in that process. A problem-solving approach to assessment moves school psychologists from the role of special education gatekeeper to a role rich with possibilities for ongoing collaborative intervention with classroom teachers.

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4

Best Practices in School Psychology and the Law

David P. Prasse
Loyola University, Chicago

INTRODUCTION

School psychology has been and continues to be influenced by various legal sources including legislation and judicial decision. Our profession has experienced an increase in that influence along with the inevitable accompanying professional and public scrutiny of the disciplines' practices and policies. While many components of psychology and education are subject to legally defined parameters, school psychology, due in part to historical ties to special education, has realized a significant legal impact that has modified roles, responsibilities, and the delivery of school psychological services in general. Indeed, of the four applied professional areas of psychology, school psychology is most likely influenced more than the other three (clinical, counseling, and industrial/organizational) because school psychologists are primarily employed by public schools. Reschly and Bersoff (1999) state it this way: "To a very great extent, state and federal laws create the requirements that lead to employment for school psychologists and, with this benefit, comes significant legal regulation over how school psychology will be practiced"(p. 1077).

As the programs and practices of education have undergone radical change as a result of judicial and legislative influence, so too have the service delivery components of school psychology. Courts, in their role as mediator between the rights of students and parents and the rights/responsibilities of schools, have moved to protect and define procedural and substantive due process for students, especially students with disabilities. Courts have instructed school systems to provide special education programs where there has been an absence of programs or where inadequate programs have not met the educational needs of students. The legislative influence of P.L. 94-142, The Education of all Handicapped Children Act (EHA) (1975) along with subsequent revisions, Section 504 of the Rehabilitation Act (1973), the Americans with Disabilities Act (1990), and more recently substantive revisions to the Individuals with Disabilities Education Act (IDEA, 1997), are well known and much of the legal influence on the discipline of school psychology is a result of these and similar state-based legislation. Understanding the scope of legal influence on school psychology is fundamental to a comprehensive knowledge of best practices.

As the legal parameters change, so does the school psychology/law relationship. This constant state of flux means that which is mandated or required today may change tomorrow. A practice or process followed yesterday (or today) may be judged inappropriate or illegal in the future! As societal priorities change and individual rights are further defined, legal requirements change and the parameters of influence expand and/or constrict. Where there exist "fundamentals" of law that, for the most part, remain stable across time, the daily practices and service delivery approaches are susceptible to legislative and judicial interpretation of those fundamental legal principles.

What follows is a review of legal principles that serve as a foundation for best practice. Best practice within the context of legal influence is understood to mean not only compliance with legal mandates but also delivery of school psychological services consistent with services established in the *School psychology: A blueprint for training and practice* (National Association of School Psychologists, 1997). The purpose of this chapter is to review what we know about the influence of law on school psychology in the schools and therefore what we expect all school psychologists to know and understand. The intent is not to provide detail about the specifics of best practice but rather to highlight the areas of knowledge regarding school psychology and the law that should be known to all who practice school psychology.

BASIC CONSIDERATIONS

Sources of Legal Influence

There exists a sequential nature to sources of law that reflect (in most cases) application of broad principles to specific situations. It is expected that specific laws, practices, and procedures are consistent with broad principles. Understanding the broad principles provides the foundation upon which we problem solve specific situations. The sources of law are, for the most part, hierarchical as follows:

Federal Constitution
↓
Federal Statute
↓
State Constitution
↓
State Statute
↓
Administrative Rules
↓
Local Policy and Procedure

Sources of law are more influential (i.e. having greater impact) the higher they are in the hierarchy. Sources of law are sequentially subordinate and those that exist beneath others are narrower in scope and applicability. However, on occasion these same lower order sources may be no less important than those sources higher in the hierarchy.

CONSTITUTION

The cornerstone of all law is the U.S. Constitution. Sources of law (federal and state statutes, judicial decisions, etc.) are subject to the provisions of the Constitution. Laws, practices, and procedures not congruent with principles established by the Constitution are eventually judged (usually by a court) as unacceptable.

The U.S. Constitution has nothing directly to say about education, yet everything to say about the manner in which education (including school psychological services) is provided to the public. There is no Constitutional right or guarantee to an education. Providing an education to the public is a matter left to the individual states by way of the Tenth Amendment, which states:

> The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively.

Therefore, states may provide a public education to its citizens. In so doing, the state must do so in a manner that is compatible with the principles established by the Constitution.

It is this requirement that impacts the delivery of school psychological services. As an aspect of public education, school psychological services must adhere (as education in general) to established constitutional principles. When the practices and procedures of school psychology violate those principles, they will likely be viewed as unacceptable. Knowledge of these fundamental constitutional principles and the legislation and litigation that builds on them is necessary to effective problem solving when weighing the legal parameters associated with delivering school psychological services.

LEGISLATION

Legislation, or statute, is the most influential source of law affecting the delivery of educational and school psychological services. Enacted by Congress or state legislatures, legislation is created to provide the mechanism for implementing constitutional guarantees or for the purpose of initiating specific programs. Federal legislation important to school psychology is either program legislation or civil rights legislation. Program legislation provides funds for delivering specific programs (e.g. Chapter I, Special Education), and in providing these funds mandates that agencies (e.g. schools) delivering the services do so in a manner prescribed by the legislation. The *Individuals with Disabilities Education Act Amendments of 1997* is among the most widely known. Its precursor was the *Individuals with Disabilities Education Act of 1990* and the *Education for All Handicapped Children Act of 1975*, most often referred to as P.L. 94-142. Through IDEA, funds (albeit limited) are made available for educating children with disabilities. The procedures by which these educational services are delivered are specified by the legislation and recipients are obligated to comply with the requirements. Civil rights legislation differs in that requirements are usually not tied to program funding; that is, procedures mandated by the law must be adhered to even in the absence of funds tied directly to a program. *Section 504 of the Rehabilitation Act of 1973* and the *Americans with Disabilities Act of 1990* are relevant examples of this type of legislation.

State statutes serve to enact the principles established by a state constitution or federal mandate and may be quite specific and detailed. For example, most states have a compulsory school attendance law and a law that provides for educating children with disabilities. The later must be compatible with Constitutional principles and requirements delineated in IDEA and Section 504. State laws affecting education are wide ranging and differ from state to state. For example, mandatory child abuse reporting laws may or may not detail the precise steps necessary for reporting suspected abuse. Direct and indirect impact on school psychology will vary accordingly.

ADMINISTRATIVE RULES

When a law is enacted, a specific governmental agency is charged with implementing the requirements of the statute. Inasmuch as the legislation may not include all the specific details necessary for successful implementation, the appropriate governmental agency is empowered to write rules to accompany the newly enacted law. When adopted, these rules are equivalent in importance and influence to the statute itself. At the federal level a statute pertaining to education is usually administered by the Department of Education, which is then responsible for developing corresponding rules. At the state level, the relevant agency is frequently the Department of Public Instruction or Education and has similar responsibilities to those found at the federal level. These governmental agencies will usually "propose" rules, hold public hearings, and finally adopt the rules. Paying close attention to the rule-making process as well as possessing a thorough knowledge of the final rules is a necessary and crucial component for understanding the intent and specific requirements of a particular law.

Litigation/Case Law

Litigation is the source of and knowledge base for law that we refer to as case law. The influence of judicial decision making is predicated, in part, on the judicial structure itself. There exists a federal court system and individual state court system. The federal system includes three levels: U.S. District Courts (trial courts where trials are conducted); U.S. Court of Appeals (13 judicial circuits); and the U.S. Supreme Court (court of last resort). Generally, the federal judicial system is used when the question involves a Constitutional issue or a federal statute. Each state has its own judicial system, and each system varies greatly. Like the federal system there are different levels often including circuit or trial courts, one or two levels of appellate courts, and a state "supreme" court.

The import of a judicial decision depends, in part, on the level of court in which the issue is adjudicated. Generally, the higher a court is in the system, the greater the impact or influence. For example, a state supreme court decision is applicable to that particular state, while a decision rendered by a U.S. Court of Appeals is applicable to that entire district which, except for the District of Columbia and one dealing with special patents and copyright issues, includes several states. Decisions of the Supreme Court are applicable to all states and effectively become the law of the land. The higher the court in the judicial hierarchy the more authoritative its decision and accompanying opinion.

The fundamental purpose of judicial decision is to resolve conflict—conflict that arises from two different interpretations of a statute or from questions embodied in a state or the federal Constitution. Judicial decisions involve determining the intent of the legislature and the compatibility of that intent and/or practices with constitutional principles. Statutes or practices that violate constitutional principles are then overturned or modified by the court. The potential impact or influence of case law is thus twofold. First, the jurisdiction of the court (where it is in the hierarchy) determines the influence of the decision. Second is the cumulative influence established through a series of decisions that when taken together establish a clear and unequivocal trend, pattern or precedent.

PROFESSIONAL STANDARDS AND ETHICAL CODES

Professional standards or ethical codes represent an additional (albeit indirect) source of legal influence on the discipline of school psychology. (See Jacob, this volume, for coverage of ethical practice). Standards that directly bear on school psychology include the *Principles for Professional Ethics* (National Association of School Psychologists, 2000a), *Ethical Principles of Psychologists and Code of Conduct* (American Psychological Association, 1992), *Standards for Training and Field Placement Programs in School Psychology* (National Association of School Psychologists, 2000b), and *Standards for Educational and Psychological Tests* (American Psychological Association, American Education Research Association, & National Council on Measurement in Education, 1984). In addition, most state school psychology associations have adopted professional practice codes.

Although important to the overall process of shaping and monitoring behavior of school psychologists, professional standards are not, at least in the traditional sense, "the law" and therefore do not carry the same weight or influence as statutes or case law. Professional standards interface with the law, and as such, are not free to develop from discipline preferences alone. The existence of a standard in the National Association of School Psychologists *Principles* that states, "School psychologists avoid any action that could violate or diminish civil and legal rights of clients" is clear acknowledgement of this interface.

Nonetheless, professional standards are very important to the profession (including the consumers of services) in that they represent consensual thinking with respect to best practices. They become the standard by which professional behavior is judged by both peers and on occasion the courts. Courts have and continue to refer to professional standards when reviewing the behavior of an individual psychologist and when reviewing the procedures and policies of service delivery systems. In the legal arena, the "clout" of professional standards may be described as a dynamic state of potential. That is, if a court considers professional standards during deliberations and bases decisions (even in part) on professional standards, then those standards become (at least in that particular case) like the law. The more times that occurs, the stronger is the "legal" influence of professional standards.

BEST PRACTICE: LEGAL FOUNDATIONS FOR PROBLEM SOLVING DELIVERY SYSTEMS

Attempts to define or describe best practice with respect to school psychology and the law is challenging for two reasons. First, as stated earlier, law or legal influence is dynamic. Requirements, restrictions, and parameters around professional practice tend to change, sometimes with short notice. Second, legal influence on practice is subject to interpretation. Professional opinions (both psychologists and lawyers) differ with regard to not only basic legal principles but also as to how specific requirements should be implemented. The "correct way" to deliver services is then open to debate.

What should be known by school psychologists about the law is tied to a few fundamental and important areas. They are fundamental, for they serve as the basis for day-by-day problem solving. They include an understanding of specific components of the Constitution, certain procedures and principles that flow from the Constitution, an understanding of children's rights, and, finally, specifics of relevant legislation and litigation. We turn first to the Constitution.

THE CONSTITUTIONAL FOUNDATION

A theme that permeates discussion with respect to legal requirements and mandates for school psychology is *May we do this?* or *Will I be held liable for this?* Delivering school psychological services in a problem solving delivery system is, in large part, dependent on understanding the *intent* of the law (case or statute) that emanates from fundamental constitutional principles. To understand these principles is to know the foundation for judicial decision, which provides a knowledge base from which specific practice questions are answered.

The Constitutional principles relevant to judicial decisions and legislation are relatively few in number. As indicated earlier, it is the Tenth Amendment that establishes education as a state function. Other relevant Amendments include the First and Fourteenth. The Fourteenth Amendment has been most influential with respect to special education and school psychological services, for many court decisions that have clarified the rights of children and educational practice have, in large part, been based on this Amendment. The Fourteenth Amendment states, in part:

> No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws.

Application of the Fourteenth Amendment to education and school psychology is understood through a brief elaboration of the two clauses: the due process clause and the equal protection clause. Application of the Fourteenth Amendment by courts to services provided in the schools means that most actions respecting children with disabilities (or suspected disabilities) must guarantee equal protection and due process.

EQUAL PROTECTION AND THE RIGHT TO AN EDUCATION

Equal protection guarantees a person the same rights and benefits all other citizens enjoy with respect to their government (e.g., schools) unless the withholding of those rights and benefits is for a valid reason that justifies the state in singling out the person for differential treatment. As stated earlier, there is no federal constitutional right to an education. However, when states choose to provide an education to its citizens (as all states do) they must do so in a manner that is acceptable to fundamental constitutional provisions. Judicial intrusion into the educational arena has been mixed. However, the judicial cornerstone applying the equal protection clause to education and providing an equal educational opportunity for all children, including those with disabilities, is *Brown v. Board of Education* (1954). Reversing almost 60 years of judicially supported segregation (*Plessy v. Ferguson*, 1896), *Brown* addressed the applicability of the equal protection clause to public education. The *Brown* decision established that educating minority children in separate but "equal" facilities violated the equal protection clause of the Fourteenth Amendment and therefore denied them an equal educational opportunity. The reasoning of the Court was that education became a property interest when states made it available to its citizens and the notion of separate but equal was inherently unequal.

When the Court found this practice violated the equal protection clause, it established the foundation upon which the exclusion of children with disabilities from school would subsequently be challenged. That challenge was helped by the Court's decision in *Brown* that made clear the applicability of the Fourteenth Amendment to the public school arena. Indeed, the rationale and precedent established by the Court should be critically considered as potentially applicable to the current debate surrounding inclusion. It was against the backdrop of *Brown* and the political promise of equality and equal opportunity emerging in the 1950's and 1960's that the hope for educating children with disabilities emerged.

DUE PROCESS

Due process as a requirement of law and as a component of delivering educational services is derived primarily from the Fourteenth Amendment. Turnbull and Turnball (2000) refer to procedural due process as the legal expression of fairness. There are certain rights and privileges that a state may not arbitrarily take from a citizen (in this case student or parent) and that the state (school district) may not act unreasonably, arbitrarily, or capriciously in dealing with a citizen (student). Procedural due process "is a flexible concept whose precise contours change relative to the nature and gravity of the interest infringed" (Bersoff & Prasse, 1978, p. 402). So the due process clause of the Fourteenth Amendment requires that no person may be deprived of life, liberty, or property without due process of law. As stated by Reschly and Bersoff (1999), "Due process is a mechanism that is intended to ensure fundamental fairness in decision making" (p. 1078).

We have made clear that education is not a right guaranteed by the Constitution, but is instead, a duty left to the states via the Tenth Amendment. Yet, the due process and equal protection components of the Fourteenth Amendment are made applicable to the delivery of educational and psychological services as a function of case law. The reason for that is that education is considered a property right and may not, therefore, be taken away arbitrarily and without due process of law (*Goss v. Lopez*, 1975).

Judicial application and interpretation of the Fourteenth Amendment is a continuous and dynamic process. Court decisions range from establishing an equal educational opportunity for persons with disabilities to mandating assessment practices that do not result in disproportionate placement or overrepresentation of minorities. Among the procedures affecting school psychological services that are required by dint of the Fourteenth Amendment are:

1. Written notice to parents if a school proposes to change or refuses to change, the identification, evaluation, or educational placement of the child.
2. Providing parents an opportunity to present complaints with respect to any matter relating to the identification, evaluation, or educational placement of their child.
3. Procedural requirements of informed written consent prior to assessment and special class programming.
4. All requirements specific to nondiscriminatory assessment.

Application of the Fourteenth Amendment to the educational arena for children with disabilities resulted in dramatic change. It opened the school house door to children with disabilities.

PROGRAM AVAILABILITY

Legal influence on educational programming is an outgrowth of litigation involving the provision of educational services to children with disabilities. It was litigation and later legislation that resulted in various mandates to provide an education to children, particularly the child with disabilities. The legal foundation for requiring equal educational opportunity for children with disabilities is the equal protection clause. By applying the equal protection clause of the Fourteenth Amendment to education, courts created the fundamental concept of an equal educational opportunity thereby precluding states from excluding from its schools children with disabilities. For many years children with disabilities were excluded from public schools and were often out of school altogether or shunted to inappropriate institutions.

The precedent-setting cases that challenged school systems and states that systematically denied a free public education to the disabled include *PARC (Pennsylvania Association for Retarded Citizens [PARC]) v. Commonwealth of Pennsylvania* (1972) and *Mills v. Board of Education of the District of Columbia* (1972). *PARC* challenged the exclusion of mentally retarded children from school who were deemed "uneducable" or unable to profit from an education on the basis that such exclusion violated their equal protection and due process rights. The consent decree set forth important principles including the notion of individualized education, no extra costs for parents simply because their child was disabled, and various due process requirements. The case, receiving national media attention, served as an impetus for similar litigation throughout the country.

The children represented in *Mills* were denied an equal educational opportunity as a result of their various handicapping conditions and the district denied them an education by utilizing procedures of suspension, exclusion, and class reassignment. In addition, their due process rights were denied when the district assigned them to special classes, precluding them from access to regular education programs. In finding for the plaintiffs the court dismissed limited financial resources as a basis for the denial of equal educational opportunity and ordered an equal expenditure of funds so that no child would be excluded from a publicly supported education. *Mills*, unlike *PARC*, applied not only to mentally retarded children but to other handicapped conditions as well. Together these cases served as a basis for the development of federal legislation, particularly, P.L. 94-142, requiring equal educational opportunity for children with disabilities. Indeed it was the due process provisions of *Mills* that served as the foundation for the specific requirements that were to emerge in the Education for All Handicapped Children Act of 1975 (EAHCA).

THE LEGISLATIVE FOUNDATION

Although pervasive in their impact on school psychological services, the federal laws that shape daily practice are actually few in number. However, they are comprehensive and detailed in coverage, and more then any other source have influenced the practices and procedures of school psychology. Earlier program or funding legislation was distinguished from civil rights or anti-discrimination legislation. The statutory provisions of Section 504 of the Rehabilitation Act are requirements that attempt to ensure disabled persons are not discriminated against.

Section 504 of the Rehabilitation Act. Adopted in 1973 as an amendment to an older law that focused on vocational rehabilitation regarding employment, the 1973 Rehabilitation Act provided that recipients of federal financial assistance could not discriminate on the basis of a handicap. Although adopted in 1973, the implementing regulations were not approved until 1977. Section 504 (as it is often referred to) is civil rights legislation, and is similar therefore to other anti-discrimination legislation such as that dealing with race (Title VI) and gender (Title IX). Ensuring compliance is then the responsibility of the Office of Civil Rights, not the U.S. Department of Education. The over arching requirement is that *all* recipients of federal funds not discriminate against an otherwise qualified disabled individual on the basis of disability. As such, requirements extend to many institutions (public and private) including business, health care, and of course schools.

Section 504 defines a disabled person as follows:

> any person who (i) has a physical or mental impairment which substantially limits one or more of such person's major life activities, (ii) has a record of such an impairment, or (iii) is regarded as having such an impairment. [29 U.S.C. Sec.706 (7)(B)].

Physical or mental impairment includes physiological disorders or conditions, including cosmetic disfigurement, and mental or psychological disorder includes mental retardation, organic brain syndrome, emotional or mental illness and specific learning disabilities. Major life activities are "functions such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning and working."(34 C.F.R. Part. 104.3).

Section 504 (Subpart D) requires that districts provide a "free appropriate public education" (FAPE) to each qualified person with a disability, regardless of the nature or severity of the disability. Districts are required to provide a full range of special accommodations and services necessary for students with disabilities to participate in and benefit from public education programs and activities.

Under Section 504 a free appropriate public education requires districts to follow procedures that ensure:

1. Nondiscriminatory evaluation and placement procedures.
2. Periodic re-evaluation of handicapped students.
3. Educational services that meet individual educational needs.
4. Educational services equal in quality to that provided for non-disabled students.
5. To the maximum intent possible, educating disabled students with non-disabled students.
6. Due process procedures that ensure parent participation in evaluation and placement decisions and provides for an impartial hearing with parent representation by counsel.

A determination under Section 504 that a student has a disability does not necessarily mean that the student would be declared disabled according to the criteria specified under IDEA. In those cases students' educational needs must be provided for by general education programs, and specific individualized educational needs met through the resources of general education.

Americans with Disabilities Act. Unlike Section 504, which covers only recipients of federal financial assistance, the Americans with Disabilities Act (ADA, 1990) is a civil rights law that prohibits the discrimination of people with disabilities in programs and activities, public and private, and ensures, therefore, the civil rights of all those with disabilities. The ADA represents the most comprehensive piece of civil rights legislation directed toward the disabled or those who are regarded as disabled that Congress has ever enacted. The applicability of the ADA does not distinguish between public and private institutions, and extends its requirements to education, employment, and state and local government.

The fundamental premise of the ADA is to extend equal protection/opportunity to those who are (or are regarded as) disabled. The definition of disabled set forth in the ADA is similar to that found in Section 504. It is applicable to an individual who has, has a history of having, or is regarded as having an impairment that significantly limits one or more of life's major functions.

The specific section of the ADA applicable to education is Title II, Subtitle A. This section applies directly to public schools and is quite similar in language to that of Section 504. It not only prohibits discrimination on the basis of a disability, but also requires schools to make reasonable accommodations for students with disabilities. The requirements include, among others, notice regarding these provisions, due process procedures, and providing education in integrated settings (inclusion). In general, the ADA requires full compliance with Section 504 and sometimes more than is required by Section 504 (Jacob-Timm & Hartshorne, 1994).

The applicability of the ADA to identified students with disabilities is mitigated, in part, by litigation brought under the ADA in employment discrimination. The ADA prohibits discrimination against those who are disabled but "otherwise qualified" to perform the basic duties of the job, with or without reasonable accommodation. Recently, the Supreme Court reached similar conclusions in three cases that bear directly on the applicability of the ADA (*Albertsons, Inc. v. Kirkingburg*,1999; *Sutton v. United Air Lines, Inc.*, 1999; *Murphy v. United Parcel Service, Inc.*, 1999). In each case, the Court reached a conclusion that determining whether a person has a disability and is protected by ADA is mitigated by measures that might "correct" the disability. If those measures reduce the impairment resulting in no significant limitations (as defined in the ADA) then the individual is not "disabled" under ADA (Turnbull & Turnbull, 2000). There are several implications for those students who are disabled. If their disability is "corrected" via an intervention (e.g., medication) they are no longer eligible to bring a claim under the ADA. The Court's interpretation of the ADA may eventually impact litigation brought under Section 504, as the language in each is so similar (Turnbull & Turnbull, 2000).

Individuals with Disabilities Education Act. Triggered, in part, by the litigation of *PARC* and *Mills*, Congress, in 1974, passed a funding bill that required states to adopt goals that would ensure equal educational opportunities to all handicapped children. Establishing such goals was a condition for receiving federal funds (P.L.93-380). The following year Congress passed EAHCA, which became effective in 1977. In 1990, Congress amended the EAHCA and retitled the law as the Individuals with Disabilities Education Act (P.L.101-476, 20 U.S.C. Sec. 1400 [a]). Finally, in 1997 Congress amended the IDEA again, through reauthorization. The IDEA Amendments of 1997 (P.L. 105-17) is the most significant special education legislation adopted in the past 22 years. While the fundamental requirements of providing FAPE remain in place, IDEA 1997 clarifies that special education is no longer a *place* but a *set of services* (Prasse & Schrag, 1999).

The adoption of legislation mandating an equal educational opportunity to students with disabilities brought with it cornerstones of service delivery that continue to shape the practice and procedures for delivering both special education and school psychology services. These cornerstones remain the foundation for problem solving many of the questions that arise about delivering services to students with disabilities. These broad principles help us understand what is operationally meant by FAPE.

Zero Reject. IDEA (as well as Section 504) makes it clear that all children are to be afforded an equal educational opportunity and states may not deny an education on the basis of a disability. Further, the law requires that states be affirmative in seeking out those who are disabled through "child find" activities. Extending an education to all disabled students today means those eligible students ages birth through 21. In addition, the severity of the disability is not a reason to deny an otherwise eligible student an education. As a result, we have come to accept an expanded definition of education to include even basic and fundamental life skills such as feeding and toilet training. Students may not be excluded from school only on the basis of a disability, and if a student's behavior at school is disruptive yet caused by the disability, schools remain obligated to provide for the student's education (Buesing & Prasse, 1991). Changes to IDEA 1997 attempted to clarify the relationship between disability, behavior, and school disciplinary action. If the student's behavior is a manifestation of the disability, then the school may discipline, but is restricted both by procedures and type of discipline. If the behavior is a manifestation of the disability, then the school must reevaluate the current educational program. While students may be suspended for 10 days, they are protected by the "stay put" provision if the change in program proposed by the school is contested by the parent. Schools that move to suspend for more than 10 days are affected by the "stay put" provision and must conduct a functional assessment of behavior (FAB) and develop a behavioral intervention plan. Students who pose a danger to themselves or others may be removed from school and provided an alternative education program.

Appropriate Education. Since the adoption of the federal law requiring public schools to provide an equal education opportunity to students with disabilities, the notion of what is an appropriate education has proven to be one of the most dynamic and evolving principles of the law. Professionals have debated issues of appropriate education in the literature while courts have rendered increasingly specific decisions that further define what is meant by appropriate.

To help determine what is appropriate, courts have turned to two key components required of districts when implementing FAPE. They are the *Individualized Education Program* (IEP) and *Least Restrictive Environment*. As a requirement of IDEA, the legal definition of an IEP means a statement of the child's present levels of educational performance, including

1. How the child's disability affects the child's involvement and progress in the general curriculum (i.e., the same curriculum as for nondisabled children).

2. A statement of measurable annual goals, including benchmarks or short-term objects (that relate to how the child will be involved in and progress in the general curriculum).

3. A statement of the special education and related services and supplementary aids and services and a statement of program modification or supports that will be provided the child.

4. An explanation of the extent, if any, the child will not participate with nondisabled children in regular class.

5. A statement of any individual modifications in the administration of statewide or district-wide assessments of student achievement (IDEA 1997 requires students with disabilities to participate in these assessments unless the district determines participation for that student to be inappropriate).

6. A statement of how the child's progress toward annual goals will be measured and how the child's parents will be informed of that progress(34 C.F.R. Sec. 300.347).

Least restrictive environment requires "that to the maximum extent appropriate, handicapped children, including children in public or private institutions or other care facilities are educated with children who are not handicapped"(34 C.F.R. Sec. 300.550[b][1]). The legal definition continues with a requirement that "special classes, separate schooling or other removal of handicapped children from the regular educational environment occurs only if the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily" (34 C.F.R. Sec. 300.551[b][2]).

Individualized Education Program. The requirement that a school district develop a plan (as outlined above) unique (individualized) to a student's educational needs that includes goals, objectives, and time lines for implementation has been used by the Supreme Court as one basis by which to judge the Congressional intent of the meaning of an appropriate education. In *Board of Education of the Hendrick Hudson Central School v. Rowley* (1982) the Supreme Court dealt for the first time with the question of what constitutes an appropriate education. Deciding whether or not a deaf child required an interpreter (as a related service), the Court ruled that the interpreter was not required under the law. In reaching this decision the Court emphasized the legislative history of P.L. 94-142 and concluded that the intention of Congress was not to maximize development of students with disabilities. Rather it was to grant access to educational opportunity and provide a reasonable opportunity to learn. Noting that the student had learned and progressed from grade to grade and that the professionals who developed the IEP acted according to correct "procedures," the Court concluded the district had satisfied the intent of what is referred to as the "open door" policy or, in other words, provided comparable treatment. Therefore, in the opinion of the Court the intent of IDEA is to provide a reasonable opportunity for students to learn, not necessarily to maximize their potential.

The relevance of *Rowley* to the IEP and an appropriate education is noted when the Court affirmed what might be termed a process definition of the IEP. That is, if the IEP was developed procedurally in a manner compatible with the requirements of IDEA, then it will be deemed appropriate. An IEP developed by a group of professionals and parents becomes, then, the basis or cornerstone for individualizing an education program. The *Rowley* decision affirmed that what was meant, in part, by appropriate education is gleaned from an overall understanding of IDEA which emphasizes process and inputs rather than results and outputs (Turnbull & Turnball, 2000), an emphasis that would change with IDEA 97.

The relevance of the IEP to judging an appropriate education was strengthened in *Irving Independent School District v. Tatro* (1984). The fundamental question involved was whether or not Clean Intermittent Catheterization (CIC) was a necessary related service or was it excluded as a medical service as is provided under IDEA. The child in question had spina bifida with orthopedic impairments, and she required CIC assistance during the school day. The requirement was not mentioned as a component of the IEP and, as such, the district refused to administer it.

The Court affirmed the Tatro's claim that their child was entitled to CIC. The Court ruled that CIC is a related service as defined under IDEA, for it is a service that provides a meaningful access to an education. Necessary to the decision was to rule CIC a school health service and not a medical service.

With regard to an appropriate education the implication of the *Tatro* decision is two fold. First the decision affirms judicial review regarding the appropriateness of the IEP. Going therefore a step beyond *Rowley* the Court made clear their intent to judge the appropriate education standard not only on the basis of adherence to procedural safeguards, but on the basis of substance and content as well. The Court did review the content and substance of the IEP and found it wanting. On the heals of *Tatro*, the Supreme Court considered the question of what constitutes an appropriate education and IEP in *Cedar Rapids Community School District v. Garret F.* (1999). At age four, Garret was paralyzed in a motorcycle accident. He spoke and controlled his wheelchair via breath through a straw. He required a ventilator to breathe and someone to attend to physical needs while in school. By fifth grade his mother requested the district to pay for the health care services and the district refused. The central question before the Court was whether the definition of "related services" required the school district to provide Garret with certain nursing services during school hours. Affirming the decision of the Court of Appeals, the Supreme Court held the school district responsible for providing and funding the related services for Garret while in school. In so doing, the Court made clear that these services were not medical services as defined in the law, but rather school health services and thereby affirmed Garret's right to attend school with his peers. Each of these decisions serve to broaden the construct of related services to not only enable the child to benefit but to obtain access to educational services.

Least Restrictive Environment and Inclusion. The judicial cornerstone for educating children with disabilities with children who are not disabled is over 40 years old, for it was *Brown v. Board of Education* (1954) that applied the equal protection clause of the Fourteenth Amendment to the issue of racial segregation in our public schools. Holding that separation is inherently unequal, the Supreme Court set forth the argument that education, when guaranteed by a state, is a property interest and must therefore be delivered in a manner that affords due process of law and equal protection of the laws. The principles set forth in *Brown* became the basis for subsequent litigation that forced the public schools to extend an equal educational opportunity to children with disabilities (*PARC v. Pennsylvania*, 1972; *Mills v. Board of Education*, 1972). Separating children (either on the basis of race or disability) became, then, a practice that was considered unacceptable if not illegal, and at both the state and federal level legislation emerged that not only required an equal educational opportunity for the disabled student but also required that it be delivered in a "least restrictive environment." The requirement is nested in the judicial holding that separate is not equal, and separation stigmatizes. In addition, interacting with non-disabled peers is considered an essential activity in the education and development of disabled students.

IDEA 1997 defines least restrictive environment (LRE) as follows:

> To the maximum extent appropriate, children with disabilities, including children in pubic or private institutions or other care facilities, are educated with children who are not disabled, and special classes, separate schooling, or other removal of children with disabilities from the regular educational environment occurs only when the nature and severity of the disability of the child is such that education in the regular classes with the use of supplementary aids and services cannot be achieved satisfactorily. (Sec 612, (a)(5)(A) IDEA, 1997).

The consideration of the LRE variable in the appropriate education equation has proven to be one of the most challenging and continuously changing professional requirements. Even the language and concepts have changed markedly in the past 10 years, from *mainstreaming* to *inclusion*. The program and philosophical initiatives reflected in the Regular Education Initiative speak directly to this change.

The current issue related to LRE involves *inclusion*, meaning the practice of including students with disabilities in general education classes. Education in the LRE, or *mainstreaming*, has in the past meant that students with disabilities were placed in general education classes only after assignment in special education and only if their skills suggested they could succeed when "cast into the mainstream" (Prasse & Martin, 1996). One effect of mainstreaming has been the exclusion of students with moderate or severe disabilities, and those students with acting-out or oppositional behaviors from participation in general education classes in large part because they were unable to participate at the same rate as their peers (Prasse & Schrag, 1999).

More recent inclusion efforts are based on the needs of the whole student and not exclusively on academic performance as contrasted with that of the mainstream students. Inclusive schooling involves the student attending the school he or she would normally attend if he or she did not have a disability, and with age or grade general education placements occurring without on-site, self-contained classes. Inclusion is based on including students in general education classes and bringing special education services in the form of supportive services to the student, rather than pulling students with disabilities from general education classrooms. In other words, the default program/placement for a student with a disability is the general education program.

While inclusion of students with disabilities in general education classrooms appears to have recently attracted professional attention, the expectations for this practice are long-standing. The Supreme Court, in its first examination of the IDEA, found: "The Act requires participating states to educate handicapped children with nonhandicapped children whenever possible" (*Rowley*, p. 202). The Ninth Circuit previously found the "Congressional preference for educating handicapped children in classrooms with their peers is made unmistakably clear" (*Dept. of Educ. State of Hawaii v. Katherine D.* p.817, 1983). The Third Circuit found to deny "access to a regular public school classroom without a compelling educational justification constitutes discrimination" (*Tokarcik v. Forest Hills School District*, p. 458, 1982).

Because Congress, through legislative action, adopted the ruling in right-to-education cases (e.g., that students with disabilities had the right to access the same program and activities as students without disabilities), Congress declared that students with disabilities must be educated with students without disabilities to the maximum extent appropriate. To make sure that students were not segregated in order to receive services, and that those integrated students were not left to fend for themselves in classrooms designed for the education of students without disabilities, Congress required that supplemental aids and services for students with disabilities be made available within the regular classroom.

The central program and legal question is whether the services needed in the segregated (or more restrictive) environment could be feasibly provided in a nonsegregated setting. "If they can, the placement in the segregated school would be inappropriate under the Act" (*Roncker v. Walter*, p. 700, 1983). *Oberti v.*

Board of Education (1993) at the trial level made the point even clearer that schools cannot refuse to place special services in regular settings:

> The IDEA requires school systems to supplement and realign their resources to move beyond those systems, structures, and practices which tend to result in unnecessary segregation of children with disabilities (p. 1333).

In the past few years, the courts have rendered important decisions that focus inclusion questions, further interpret those sections of IDEA that bear heavily on the LRE mandate, and support IDEA reforms that reinforce programming in general education classes, rather than differential diagnosis and categorical placement. Recent court decisions constitute a trend that is supportive of program reforms that bring resources to students, rather than students to resources.

The first court decision to deal with what is referred to as the LRE was *Roncker*, in 1983. In 1987, the Eighth Circuit considered the issues in *A.W. v. Northwest R-1 School District* (1987), and the Fifth Circuit Court of Appeals adopted a standard for the questions that would be asked in *Daniel R.R. v. State Board of Education* (1989). The *Daniel R.R.* standard built on *Roncker*. Also, in 1989, the Fourth Circuit added its analysis in *Devries v. Fairfax County School Board* (1989). Two years later, the Eleventh Circuit adopted the *Daniel R.R.* approach in *Greer v. Rome City School District* (1992). In 1993, the Third Circuit Court of Appeals in *Oberti* adopted the *Daniel R.R.* approach. In 1993 the Sixth Circuit restated its *Roncker* position in *Doe v. Bd. Of Educ. of Tullahoma City Schools* (1993). The District Court in *Board of Education v. Holland* (1992) adopted the *Daniel R.R.* and *Greer* approaches and reasoning. So, this brief review establishes the import precedent set by *Daniel R.R.*

Subsequent to Daniel's parents' challenge to his educational placement, the Fifth Circuit Court of Appeals ruled that Daniel's appropriate placement was full-time special education. The two-part test, as the court reasoned, for determining compliance with the LRE was as follows:

> First, we ask whether education in the regular classroom, with use of supplemental aids and services, can be achieved satisfactorily for a given child. If it cannot and the school intends to provide special education or to remove the child from regular education, we ask, second, whether the school has mainstreamed the child to the maximum extent appropriate (p. 1048).

Daniel R.R. focused the question of inclusion within the legal parameters established by the IDEA and established one set of criteria against which actions, taken by schools regarding program decisions for students with disabilities, would be judged.

Drawing on the criteria set forth in *Daniel R.R.*, the court in *Board of Education v. Holland* (1992) faced the question of whether or not a nine year old who is moderately retarded should be placed full-time in regular education classes, as was recommended by a hearing officer. In reaching its decision, the court recognized the IDEA's emphasis on individualized needs and considerations:

> Thus the decision as to whether any particular child should be educated in a regular classroom setting, all of the time, part of the time, or none of the time, is necessarily an inquiry into the needs and abilities of one child, and does not extend to a group or category of handicapped children (p. 878).

The court's decision in *Holland* was guided by factors relevant to determining if a placement is appropriate and established by federal appellate courts:

1. The educational benefits available to the child in a regular classroom, supplemented with appropriate aids and services, as compared to educational benefits of a special education classroom.

2. The nonacademic benefits to the handicapped child of interaction with nonhandicapped children.

3. The effect of the presence of the handicapped child on the teacher and other children in the classroom.

4. The costs of supplementary aids and services necessary to mainstream the handicapped child in a regular classroom setting (p. 878).

The court's decision found that the school district did not demonstrate that its proposed placement (half day in regular education) would satisfy the legal requirement of educating Rachel Holland to "the maximum extent appropriate" with her nonhandicapped peers. The school district failed to demonstrate that "placement in special classes will provide equal or greater educational benefits to Rachel" (p. 882). In short, the school district failed on all four of the above-mentioned criteria, and the court affirmed the recommendation of the hearing examiner.

Oberti v. Board of Education (1993) confronted most of the same issues that were raised in *Daniel R.R.* and *Holland*. Drawing heavily on the criteria set forth in *Daniel R.R.*, the Third Circuit Court of Appeals identified three factors that must be considered in deciding whether a child can be educated satisfactorily in a general education classroom with supplementary aids and services:

1. What steps has the school taken to try to include the child in a general education classroom.

2. Is a comparison made between the educational benefits the child will receive in a general education classroom (with supplementary aids and services) and the benefits the child will receive in the segregated, special education classroom.

3. What is the possible negative effect the child's inclusion may have on the education of other children in the classroom.

In this case, the appellate court affirmed that the school district did not meet its burden of proving that Rafael Oberti could not be educated satisfactorily in a general education classroom with supplementary aids and services.

Similarly, a federal district court in *Mavis ex.rel. Mavis v. Sobol* (1994) found that the school district failed to make a reasonable attempt to accommodate the student in the general education classroom with the support of supplementary aids and services. The district had no records to support regular education efforts, subsequent to identifying the student as disabled. With no documentation to support efforts in the general education classroom (meaning monitoring a student's progress as supplementary aids and services are provided), the district was in no position to argue that the student was unable to function in the general education classroom.

The issues were similar in *Corey H. v. Chicago Public Schools and the Illinois State Board of Education* (1998), only in this situation it was not only a school district that was challenged regarding inclusion and the LRE requirement, but a state department of education as well. Plaintiffs argued that children with disabilities in the Chicago Public Schools were segregated and placed in unequal educational environments as determined by their category of disability, not by their individual need. The Chicago Public Schools reached a consent agreement with the plaintiffs whereby the Chicago Public Schools would bring between one-third to one-half of its 553 schools into compliance with IDEA's LRE mandate within an 8-year period. The Illinois State Board of Education (ISBE) did not agree to a settlement, and their case went to trial. The Federal District Court held ISBE in violation of IDEA due to its failure to ensure that placement decisions were based on a student's individual needs as determined by the IEP. The court was direct in its judgment of the ISBE stating, "Unfortunately, and inexplicably, the ISBE continues to deny the undeniable and defend the undefendable (sic.). The 'case' it presented at trial was unpersuasive and unsupported by the facts and the law"(p. 901). The court ordered the ISBE to implement statewide procedures to identify and correct LRE violations, inform teachers and administrators of their responsibilities regarding educating children in the LRE, change the certification code and standard to comply with a LRE mandate (i.e., move away from categorical certification), and change the state funding formula to be consistent with the LRE mandate and the requirements set forth in IDEA 1997.

Not all decisions have determined regular classroom settings as the appropriate program. *Poolaw v. Bishop* (1994) supported the district claim that the least restrictive environment for a student with a hearing impairment who did not read or write was the state school for the deaf. In *MR v. Lincolnwood Board of Educ., District 74* (1994), the school district argued that the appropriate program for a student with an emotional disorder was a therapeutic day school. The court agreed with the school district. Finally, when considering the appropriate placement for a 15-year-old diagnosed with ADHD and Tourettes Syndrome, the Ninth Circuit ruled an off-campus self-contained program was the appropriate placement (*Clyde K ex.rel. Ryan K. v. Puyallup Sch. Dist.*, 1994). Of significance is that in each of these three cases, the school district was able to provide ample evidence documenting the efforts which had been extended in the general education setting.

The judgment of an appropriate education is then a complex and changing issue. The fundamental constitutional, legislative, and judicial requirements allow for the delineation of some general practice considerations, including:

1. IEP's are created by a team (professionals and parents).

2. The process followed by the team is an important legal consideration in judging the appropriateness of the school-based decision.

3. The content of the IEP is equally important, either from the perspective of what is stated, what is not stated, and what is missing that should be stated.

4. Programming must proceed on the basis of what is articulated in the IEP.

5. There must be measurable goals and objectives for each student and evaluation of a student's progress is required so that results are realized, not just services provided.

6. Parental participation is absolute at every stage.

7. Appeal of school district decisions is permitted first through the administrative hearing process and second through the court. Appeals may be based on either alleged procedural violations or alleged content/substance violations.

IDEA PROVISIONS SUPPORTING NONCATEGORICAL PROBLEM SOLVING DELIVERY SYSTEMS SUPPORTING BEST PRACTICES

There are several provisions of IDEA 1997 and the accompanying regulations (1999) that support noncategorical program delivery and problem-solving approaches rather than categorical pull-out deficit models of programming.

Findings and Purposes

In the findings that serve as the basis for the IDEA Amendments, Congress stated:

> Over 20 years of research and experience has demonstrated that the education of children with disabilities can be made more effective ...(F) providing incentives for whole-school approaches and pre-referral interventions to reduce the need to label children as disabled in order to address their learning needs; and (G) focusing resources on teaching and learning while reducing paperwork and requirements that do not assist in improving educational results (Section 601(c)(5), IDEA).

The IDEA Amendments explicitly places an emphasis on student outcomes, rather than paperwork and a previous emphasis on the process from identification, assessment, eligibility determination, program planning, and program implementation. This marks a legislative shift away from special education procedures that have been seen as almost an *end* rather than a *means to an end*. A focus on outcomes (as opposed to classification and diagnosis) will help focus on student needs rather than categories or labels.

Funding Provisions

IDEA 1997 states that "nothing in this Act requires that children be classified by their disability as long as each child who has a disability listed in Section 602 and who, by reason of that disability, needs special education and related services is regarded as a child with a disability under this part" (Sec 612 (a) (3) (B) IDEA, 1997). Although a previous federal policy, rather than explicit language in the law, this new provision within IDEA explicitly allows states to pursue noncategorical funding systems and programs without the *perceived* dilemma of generating funds through reporting within disability categories.

Other funding provisions within the IDEA Amendments support the implementation of noncategorical eligibility, placement, and programming practices. School districts may use funds received under IDEA to carry out schoolwide programs under the Elementary and Secondary Education Act. This allows school districts to explore program options that are noncategorical, are coordinated closely with other federal and state-funded programs provided within individual schools, and are part of an integrated educational whole (e.g. coordinated closely with the overall general education program).

In addition to allowing the use of Part B (special education) funds for the support of schoolwide programs, these funds may benefit children without a disability if the IEP for a child with a disability is being carried out in the regular class or other education-related setting. This provision codifies an existing federal policy that allows for limited provision of incidental benefits to students without disabilities who may be participating in activities related to IEPs of students with disabilities.

School districts may also use up to 5% of federal funds generated under IDEA 1997, in combination with other funds, to develop and implement a coordinated service system designed to improve results for children and families. This provision supports functional approaches, such as noncategorical services, and to explore problem-solving strategies for the coordination and integration of education, health, mental health, and social services (Sec 613(f)(2), IDEA, 1997).

Evaluation Procedures

A full and individual evaluation is required to determine if a child has a disability and to determine the educational needs of the child. A variety of assessment strategies and tools (including information provided by the parent) must be used to gather relevant, functional, and developmental information that may assist in determining (a) whether the child is a child with a disability and (b) the content of the individualized education program, including information related to allowing the child to be involved and progress in the general curriculum, or preschool children to participate in appropriate activities.

Tests and other evaluation materials used to asses the child must be selected and administered so as not to be discriminatory on a racial or cultural basis and provided and administered in the child's native language or other mode of communication, unless it is clearly not feasible to do so. Although criteria are provided for any standardized tests that are given to a child, the IDEA does not require standardized tests to be used. Curriculum-based assessment, functional analysis of behavior, and structured classroom-based observation are appropriate assessment strategies and techniques. In fact, the law requires a review of existing evaluation data as a component of an initial evaluation. The law requires a review of existing evaluation data "including evaluations, and information provided by the parents of the child, current classroom-based assessments and observations, and teacher and related services providers observations." Continuing, "on the basis of that review, and input from the child's parents, identify what additional data, *if any*, are needed to determine whether the child has a disability" (emphasis added). It is clear that the team has an option of not collecting additional data if it believes the existing database is sufficient. Assessment tools and strategies must provide relevant information to directly assist persons in determining the educational needs of the child (Sec. 614 (b)(d)(A-D), IDEA, 1997).

Eligibility Determinations

The Congressional intent for the IDEA Amendments of 1997 is that labeling of students by type of specific disability is not required. The evaluation and eligibility determination provisions specifically support approaches that focus on curriculum and learning rather than on remedial intervention approaches following the assignment of a disability categorical label. The law requires a variety of assessment tools and strategies to gather relevant functional and developmental information, including information provided by the parent to determine if a child has a disability (general, rather than specific category) and the content of the child's IEP. It is clear that Congress intends for the use of functional information that provides relevant information to directly assist persons in determining the educational needs of the child. In the past, the "at least perceived" necessity to label students with an eligible funding disability created an unintended outcome of testing for this purpose rather than for obtaining relevant information to guide and inform curriculum and instructional decisions (Sec 614(b)(3)(D), IDEA, 1997).

Link to the General Education Curriculum

There are a number of provisions within IDEA that emphasize the integration and coordination of special and general education. A Congressional finding within IDEA is that over 20 years of research and experience has demonstrated that the education of children with disabilities can be made more effective by (a) having high expectations for such children and ensuring their access to the general curriculum to the maximum extent possible; (b) strengthening the role of parents and ensuring families have meaningful opportunities to participate; (c) coordinating IDEA with other state and federal school improvement efforts such that special education can become a service for children rather than a place where they are sent; (d) providing appropriate special education and related services and aids and supports in the regular classroom whenever appropriate (Sec. 601(c)(5), IDEA).

Individualized Education Program

The IEP provisions of IDEA support maximum participation of students with disabilities within general education. Specifically, IEPs must contain a statement of how the disability affects the child's involvement and progress in the general curriculum. In addition, there must be measurable annual goals and benchmarks or short-term objectives related to meeting the child's needs resulting from the child's disability that will enable the child to be involved with and progress in the general curriculum. This required link to the general curriculum supports functional, classroom-based approaches, rather than a medical model that has, in the past, focused on remediation of deficiencies often unrelated to the general education curriculum (Sec. 614(d)(A (i-viii), IDEA).

The IEP team must also consider the strengths of the child and the concerns of the parents for enhancing the education of their child. This strength-based emphasis is compatible with assessment and eligibility strategies that are curriculum and instruction oriented rather than based on assessment techniques that identify deficiencies and specific disabilities/deficits.

Access to Records: The Family Educational Rights and Privacy Act

The Family Educational Rights and Privacy Act (FERPA; 1976, also referred to as the Buckley Amendment) was adopted by Congress at the same time it passed the original legislation providing an education for disabled students. Adopted as a result of many complaints from parents and students about record inaccessibility and inaccuracy, the law established rules regarding access and inspection, copying, and release of student records. Many of the requirements were repeated in later legislation (e.g., IDEA). Although the law is more than 20 years old, questions remain and some disagreement over the accessibility of certain records continues.

Questions focus on which records are accessible, which records, if any, are exempt, and how the procedures and principles of confidentiality, privileged communication, and test security relate in any way to the records access law. Frequently the questions focus specifically on accessibility of test protocols and "private notes." The answer to such questions is partially found in the law's definition of a record *and* through a study of congressional intent regarding the law. An education record is defined as follows:

A. For the purposes of this section the term "education records" means, except as may be provided otherwise in subparagraph (b), those records, files, documents, and other materials which
  i. contain information directly related to a student and;
  ii. are maintained by an educational agency or institution, or by a person acting for such an agency or institution.

B. The term "education records" does not include:
  i. records of instructional, supervisory, and administrative personnel ancillary thereto which are in the sole possession of the maker thereof and which are not accessible or revealed to any other person except a substitute.

Where psychologists have questioned the right of parents to access certain records, they usually have referred to Part B above. In claiming that a protocol is not an accessible record, some school psychologists have claimed that a protocol is in their sole possession and that they are the exclusive maker, or that the protocol is a private note.

When the meaning of legislation is unclear the intent may be learned through a review of the congressional debate and/or accompanying statements of explanation. It is here that the intent of the law is found and in this case helps clarify the issue of accessibility of protocols. It is in the Joint Statement in Explanation of Buckley/Pell Amendment (Congressional Record at S.21488, December 13, 1974) that the intent of the definition and exception is partially clarified:

> An individual should be able to know, review, and challenge all information—with certain limited exceptions—that an institution keeps on him, particularly when the institution may make important decisions affecting his future, or may transmit such personal information to parties outside the institution. This is especially true when the individual is a minor. Parents need access to such information in order to protect the interests of their child.
>
> The amendment makes certain reasonable exceptions to the access by parents and students to school records. The private notes and other materials, such as a teacher's daily record book, created by individual school personnel (such as teachers, deans, doctors, etc.) as memory aids would not be available to parents or students, provided they are not revealed to another person, other than in the case of a substitute who performs another's duties for a temporary period.

Continuing, the statements go on to say:

> If a child has been labeled as mentally or otherwise retarded and put in a special class or school, parents would be able to review materials in the record, which led to this institutional decision...to see whether these materials contain inaccurate or erroneous evaluations about their child.

The Congressional intent is affirmed in *John K. v. Board of Education for School District 65* (1987). This Illinois appellate court decision held that raw psychological test data were part of a student's temporary record subject to disclosure. The school psychologist who had administered the Rorschach argued that the verbatim responses were raw data and not subject to disclosure. The court was not persuaded either by professional standards or by federal regulations that the psychologist cited in support of nondisclosure.

Of relevance to the question of accessibility are the requirements of P.L. 94-142 that provide parents the right to inspect and review their children's records collected, maintained, and used by the school in its special education decision making. It would be difficult to argue that tests used by psychologists and test results are not used in this process and are therefore inaccessible. Certainly a parental challenge to placement (either at the hearing or judicial level) would result in a request to review test protocols. To refuse would be to deny parents the right to review important records on which the school's decision was based. Finally, access does not necessarily mean obtaining a copy. With respect to test protocols, publishing companies have made it clear that such material is protected by copyright restrictions. So while parents or their legal representatives might have access, indiscriminate or wholesale copying is not allowed. Clearly the access-to-records requirements necessitate a delicate balance between the public right to be informed and the psychologist's responsibilities to the student and accepted professional standards.

SUMMARY

As a profession we have come to experience ongoing changes that affect our practices and procedures. The sources of change come from within and from outside the discipline. The legal influence has been pervasive and constant. As school psychologists we understand the mandates of parental participation, notice and consent, the requirement that all children with disabilities be afforded an education, and the necessity to ensure valid and reliable assessments that address educational needs, not just categorical disabilities. There are constitutional foundations and statutory requirements for these and other practices, and any change in our practice will require adherence to these.

Many of the emerging reforms in school psychology are very compatible with sound legal practice—practice that not only honors the technical requirements of the law but the intent as well. Some examples include:

1. Problem-solving models that are outcomes driven and not dependent on categorical labels are reflective of best practice.

2. Curriculum-based assessment faces fewer problems associated with cultural differences than does norm-referenced assessment.

3. Greater emphasis on classroom-based instruction responsive to the individual needs of disabled students who are educated as a matter of first course with nondisabled students invites (if not demands) integration in the LRE.

4. Meaningful evaluation of short-term objectives and long-term goals increases the likelihood of achievement-oriented results and is more readily accomplished when using curriculum-based assessment.

5. Assessment strategies that are functional and curriculum-based do satisfy the assessment and eligibility requirements of IDEA.

In the end school psychological practice must focus more on strategies and skills that contribute to successful educational interventions for students and less on practices that are aimed primarily at differential diagnosis and categorical programming . The more success we have with the former the less we will need to be concerned about whether or not school psychological services are complying with legal requirements.

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5

Best Practices in Utilizing Professional Ethics

Susan Jacob
Central Michigan University

OVERVIEW

Ethics

The term "ethics" generally refers to a system of principles of conduct that guides the behavior of an individual. A system of ethics is viewed as developing within the context of a particular society or culture. Ethics is composed of a range of acceptable (or unacceptable) social and personal behaviors, from rules of etiquette to more basic rules of society.

The terms "ethics" and "morality" are often used interchangeably. However, according to philosophers, *morality* refers to a subset of ethical rules of special importance. Solomon (1984, pp. 6–7) suggests that moral principles differ from other aspects of ethics in that they are more fundamental, universal, rational, and objective. Ross (1930), a twentieth–century English philosopher, identified a number of moral duties of the ethical person: nonmaleficence, fidelity, beneficence, justice, and autonomy. These moral principles have provided a foundation for the ethical codes of psychologists and other professionals (Bersoff & Koeppl, 1993).

The focus of this chapter is *applied professional ethics*, the application of broad ethical principles and specific rules to the problems that arise in professional practice. Applied ethics in school psychology is thus a combination of moral considerations, ethical principles, and rules that guide the conduct of the practitioner in his or her professional interactions. The present chapter focuses on school-based practice. Bersoff (1999) and Koocher and Keith-Spiegel (1998) provide discussion of issues associated with independent practice.

Sources of Guidance

CODES OF ETHICS

Professional organizations such as the American Psychological Association (APA) and the National Association of School Psychologists (NASP) adopt codes of ethics to protect the welfare of consumers of psychological services and maintain the public trust in psychology. These codes are drafted by committees within professional organizations, and reflect the beliefs of association members about what constitutes appropriate professional conduct. When practitioners violate codes of ethics, they may face sanctions by their professional organization. Adoption of a formal code of ethics also serves to enhance the prestige of the profession, and may reduce the perceived need for external regulation and control.

NASP's *Principles for Professional Ethics* (PPE) (most recently revised in 2000) were developed to provide guidelines specifically for school psychologists employed in the schools or in independent practice. NASP's code focuses on protecting the well-being of the student/client, but also prescribes conduct to protect the rights and welfare of the parent, teachers, and other consumers of school psychological services. The code provides guidelines in the following areas: professional competence; professional relationships with students, parents, the school, the community, other professionals, and trainees and interns; advocacy of the rights and welfare of the student/client; professional responsibilities in assessment and intervention; reporting data and sharing results; use of materials and technology; research, publication, and presentation; and professional responsibilities related to independent practice.

APA's (1992) *Ethical Principles of Psychologists and Code of Conduct* (EP) consists of general principles and specific ethical standards to protect the welfare of individuals and groups with whom psychologists work. APA's code of ethics differs from NASP's PPE in that the EP were developed for psychologists with training in diverse specialty areas (e.g., clinical, industrial-organizational, school) who work in a number of different settings (independent practice, industry, hospitals and clinics, public schools, university teaching and research).

PROFESSIONAL GUIDELINES

Both NASP and APA have developed professional guidelines for the delivery of school psychological services. Professional guidelines differ from codes of ethics in both scope and intent. The guidelines represent a consensus of trainers and practitioners about roles and duties of school psychologists, desirable conditions for the effective delivery of services, and the nature of competent professional practice. NASP and APA seek to ensure that members abide by their respective codes of ethics and will investigate and adjudicate code violations. In contrast, professional guidelines provide a model for excellence in the delivery of quality comprehensive school psychological services, and it is recognized that not all school psychologists or school psychological service units will be able to meet every standard outlined (National Association of School Psychologists, 2000).

Ethical Codes Versus Ethical Conduct

Codes of ethics guide the conduct of the practitioner in his or her professional interactions with others. However, ethical conduct is not synonymous with simple conformity to a set of rules outlined in professional codes and standards (Hughes, 1986). Codes of ethics are *imperfect* guides to behavior for several reasons. First, they are composed of broad, abstract principles along with a number of more specific statements about appropriate professional conduct. They are at times vague and ambiguous. Second, there are often competing ethical principles that apply in a particular situation, and specific guidelines at times conflict with law. In some situations, a primary or overriding consideration can be identified in choosing a course of action; in other situations, no one principle involved clearly outweighs the other (Haas & Malouf, 1989). A third reason ethical codes are imperfect guides in the school setting is that there may be conflicting interests of multiple clients (e.g., pupil, parents, classmates). A fourth limitation of codes is that they frequently fail to address new and emerging ethical issues. Ethical conduct thus involves careful choices based on knowledge of codes and standards and ethical reasoning.

Ethics and Law

Many aspects of school psychological practice are regulated by federal and state law. Law is a body of rules of conduct prescribed by the state that have binding legal force. Failure to comply with law can result in legal action against the practitioner (e.g., malpractice suits) or the school, and possible loss of certification or licensure to practice.

Both NASP and APA codes of ethics require practitioners to know and respect the law. According to Ballantine (1979), ethical behavior must conform with the law, not defy it. Professional codes of ethics are generally viewed as requiring decisions that are "more correct or more stringent" than required by law (Ballantine, 1979, p. 636). Both NASP and APA require practitioners to adhere to codes of ethics when ethical codes establish a higher standard than required by law. When ethical codes and law conflict, psychologists are obligated "to seek to resolve such conflict through positive, respected, and legal channels, including advocacy efforts involving public policy" (NASP-PPE, III, D, #5).

BASIC CONSIDERATIONS

Four Broad Ethical Themes

Concern for the rights and welfare of children is "the top priority" in the delivery of school psychological services (NASP-PPE, IV, A, #4). However, school psychologists typically serve multiple clients including children, parents, teachers, and systems. "When the school psychologist is confronted with conflicts between clients groups, the primary client is considered to be the child. When the child is not the primary client, the individual or group of individuals who sought the assistance of the school psychologist is the primary client" (NASP-PPE, IV, A, #1).

Jacob-Timm and Hartshorne (1998) identified four broad themes underlying ethical choices in school psychology. Their four themes were adapted from ethical principles articulated in the "Canadian Code of Ethics for Psychologists" (Canadian Psychological Association, 1991). The first broad theme was *respect for the dignity of persons* (welfare of client). Consistent with this principle, school psychologists value client autonomy and safeguard the client's right to self-determination (NASP-PPE, III, B, #3; C, #4), respect client privacy and the confidentiality of disclosures (NASP-PPE, III, A, #9, #10,# 11; B, #2; C,# 6), and are committed to fairness and nondiscrimination in interactions with the client and others (NASP-PPE, III, A, #2; D, #3). The second broad principle was *responsible caring.* According to this principle, school psychologists are obligated to work within the boundaries of their professional competence and accept responsibility for their actions (NASP-PPE, II; III, A, #1). The third broad principle was *integrity in professional relationships.* School psychologists are candid and honest about the nature and scope of the services they have to offer and work in full cooperation with other professionals to meet the needs of children in the schools (NASP-PPE, III, A, #3, #4; B, #2; C, #1; E). The fourth broad principle was responsibility to community and society. School psychologists recognize that their profession exists within the context of society and work to ensure that the science of psychology is used to promote the welfare of all school children and to improve schools, neighborhoods and communities (NASP-PPE, III, A, #1; IV, B, #5).

Ethical Decisions

Ethical choices can be made on an intuitive or a critical-evaluate level. Intuitive choices are based on feeling responses to situations along with personal beliefs. Critical-evaluative choices are reasoned. In the provision of psychological services, decision making on a critical-evaluative level is consistent with sound professional practice. A decision is likely to be viewed as ethical if it is based on generally accepted ethical principles, if it is a reasoned outcome of a consideration of the principles, and if it is universalizable to other similar situations (Haas & Malouf, 1989).

Use of a Decision-Making Model

Competent practitioners are committed to a proactive rather than a reactive stance in ethical thinking and conduct (Tymchuk, 1986). They use their broad knowledge of ethical codes, professional standards, and law along with ethical reasoning skills to anticipate and prevent problems from arising. However, not all problem situations can be anticipated or prevented. Use of an explicit decision-making model may help the practitioner make informed, well-reasoned, choices in resolving problems when they do occur. Furthermore, in difficult situations, the course of action chosen may be questioned and challenged. Use of a systematic problem-solving strategy will allow the practitioner to describe *how* a decision was made. This may afford some protection when difficult decisions come under the scrutiny of others (Tymchuk, 1986). A number of ethical decision-making models have been proposed in the literature (see Cottone & Claus, 2000, for a review). An eight-step problem-solving model adapted from Koocher and Keith-Spiegel (1998) is shown in Table 1, and an application of the model is illustrated in the Appendix.

BEST PRACTICES

The remaining portion of this chapter focuses on privacy, informed consent, confidentiality, and ethical issues associated with psychoeducational assessment and intervention.

Privacy and Informed Consent

Privacy has been defined as "the freedom of individuals to choose for themselves the time and the circumstances under which and the extent to which their beliefs, behaviors, and opinions are to be shared or withheld from others" (Siegel, 1979, p. 251). The schoolchild's right to privacy is a legal and an ethical issue. Statutory and case law have recognized the need to balance the interest of the state (school) in fulfilling its duty to maintain order, ensure pupil safety, and educate children, with the personal freedoms and rights generally afforded citizens. Consequently, in the school setting, students do not have the full range

Table 1. **Ethical Decision-Making Model**

1. Describe the parameters of the situation.
2. Define the potential ethical-legal issues involved.
3. Consult ethical-legal guidelines, if any, already available that might apply to the resolution of each issue. Consider the broad ethical principles as well as specific mandates involved.
4. Evaluate the rights, responsibilities, and welfare of all affected parties (e.g., pupil, teachers, classmates, other school staff, parents, siblings).
5. Generate a list of alternative decisions possible for each issue.
6. Enumerate the consequences of making each decision. Evaluate the short-term, ongoing, and long-range consequences of each possible decision. Consider the possible psychological, social, and economic costs to affected parties. Consultation with colleagues may be helpful.
7. Present any evidence that the various consequences or benefits resulting from each decision will actually occur.
8. Make the decision. Consistent with ethical codes (APA, NASP), school psychologists accept responsibility for the decision made and monitor the consequences of the course of action chosen.

Note. Adapted from a model in Koocher and Keith-Spiegel (1998, pp. 12–15).

of privacy rights afforded adult citizens, but they are not without privacy protections. A schoolchild has privacy rights with regard to his or her person (body) and personal possessions (U.S. Constitution), education records (Family Educational Rights and Privacy Act of 1974 (FERPA)), and private thoughts, beliefs, and behaviors (the Protection of Pupil Rights Amendment of 1978 and special education law protect privacy by requiring informed parent consent prior to the gathering of certain types of personal information). In addition, state laws may provide additional pupil and family privacy protection.

Respect for client privacy also is an ethical mandate. Consistent with the general principle of respect for the dignity of persons and the valuing of autonomy, school psychologists are obligated to respect the pupil's (or other client's) right to self-determine the circumstances under which they disclose private information. Furthermore, every effort is made to minimize intrusions on privacy (NASP-PPE, III, B, #1). School psychologists do not seek or store personal information about pupils, parents, teachers, or others that is not needed in the provision of services. Practitioners comply with state regulations and district policy regarding safe storage of records, and in determining how long psychological records are retained before disposal. When obsolete confidential information is purged from files, psychologists are obligated to ensure it is shredded or otherwise destroyed (NASP-PPE, III, A, #9; IV, D, #5).

Ethical codes, professional standards, and law are consistent in requiring parent consent (or the consent of an adult student) for school actions that may result in a significant intrusion on personal or family privacy beyond what might be expected in the course of ordinary classroom and school activities (Corrao & Melton, 1988). Consequently, with the exception of unusual situations, informed consent is obtained prior to the provision of psychological services (NASP-PPE, III, A, #4; B,# 2; C, #1). In the delivery of psychological services in the schools, as elsewhere, the three key elements of informed consent are that it must be knowing, competent, and voluntary. Knowing means the individual giving consent has a clear understanding of what it is they are consenting to. Competent means legally competent to give consent. In law, adults are presumed to be competent while minors are presumed to be not capable of making legally binding decisions (Bersoff, 1983). Consequently, consent typically is sought from the parent or guardian of a minor child prior to the provision of services. Parent consent may be bypassed in emergency situations (e.g., student is suicidal), and, in some states, minors may self-refer for psychological assistance independent of parent notice or consent (see discussion below). The third element of informed consent is that it must be voluntary, that is, consent is obtained without coercion or undue enticement. Federal law outlines specific requirements for informed consent for psychological evaluation of students with suspected disabilities (Individuals with Disabilities Education Act of 1990 (IDEA)) and for the release of information from school records (FERPA). To safeguard the right of pupils with disabilities to special education services, IDEA also outlines procedures for schools to follow when parents refuse to consent to assessment of a child with a suspected disability.

Although minors are not generally seen as legally competent to consent autonomously to (or refuse) psychological services in the schools, practitioners are ethically obligated to respect the dignity, autonomy, and self-determination of their pupil-clients. However, at times it is necessary to balance the child's rights to privacy and self-determination against concerns for the welfare of the child. In the delivery of school services, it is ethical to proceed without the child's explicit assent if the service is considered to be of direct benefit to the child. School psychologists do not seek the child's assent if refusal will not be honored (Corrao & Melton, 1988; also NASP-PPE, III, B, #3).

Practitioners have an ethical obligation to inform pupil-clients of the scope and nature of psychological services whether or not children are given a choice about participating in the services (NASP-PPE, III, B, #2). Also, consistent with the principle of respect for autonomy, practitioners permit and encourage pupil-client involvement in intervention decisions (e.g., selection of goals) to the maximum extent appropriate to the child and the situation (Weithorn, 1983). A child's participation in intervention decisions may lead to enhanced motivation for treatment, an increased sense of personal responsibility for self-care, greater treatment compliance, and reduced rates of early treatment termination (Kaser-Boyd, Adelman, & Taylor, 1985; Weithorn, 1983). However, psychologists must guard against overwhelming children with choices they do not wish to make for themselves.

Self-referrals for counseling pose a particularly challenging dilemma for school psychologists. Students who are minors may wish to see the psychologist on the condition that their parents not be notified. Osip (quoted in Canter, 1989) recommends allowing one precounseling screening session without parental permission. This precounseling meeting can serve to ensure the pupil is safe and not in danger. At this time, the school psychologist can discuss the need for parental consent for further counseling sessions, offer to contact the parent on behalf of the student, or offer to meet jointly with the student and parents to discuss consent and ensure ongoing parent support.

In some states, minors are given the right to access to certain types of treatment (usually limited to conditions of a medical nature) without parent notice or consent. School practitioners need to consult their state laws to determine whether minors are given the right to seek psychological treatment independent of parental notice or consent in their state (Corrao & Melton, 1988). If state laws are silent on this issue, then practitioners may wish to work with school administrators to develop a district policy that allows minors to been seen for at least one precounseling session by the psychologist independent of parent notice or consent.

Confidentiality

School psychologists are ethically obligated to "respect the confidentiality of information obtained during their professional work. Information is revealed only with the informed consent of the client, or the client's parent or legal guardian, except in those situations in which failure to release information would result in clear danger to the client or others" (NASP-PPE, III, A, #9). The interpretation of the principle of confidentiality as it relates to the delivery of psychological services in the school setting is a complicated matter. However, one clear guideline emerges from the literature on confidentiality in the school setting. School psychologists define the parameters of confidentiality at the onset of offering services (NASP-PPE, A, #11; Davis & Sandoval, 1982). The parameters of the promise of confidentiality will vary depending on the nature of the services offered.

CONFIDENTIALITY AND DIRECT SERVICES TO THE PUPIL-CLIENT

The provision of direct services to the student means that the practitioner works with the student directly (e.g., individual counseling) and there is little or no collaboration with others. The initial interview with the student/client should include a "direct and candid discussion of limits that may exist with respect to any confidences communicated in the relationship" (Koocher & Keith-Spiegel, 1998, p. 117; NASP-PPE, III, A, #11). Much has been written about the importance of confidentiality for building and maintaining the trust essential to a helping relationship. However, as Taylor and Adelman (1989) have observed, the promise of confidentiality can limit the psychologist's ability to help when the client is a minor child. Consequently, school psychologists must weigh a number of factors in deciding the boundaries of a promise of confidentiality (e.g., age and maturity of the student-client, self-referral or referral by others, reason for referral). Whatever the parameters, the circumstances under which the psychologist might share confidences with others must be clear. Taylor and Adelman (1989) provide suggestions regarding how to create an atmosphere of safety and trust in which the pupil knows and understands the exceptions to the promise of confidentiality, yet is motivated to disclose personal thoughts, feelings, and important information.

In the provision of direct services to the student, there are three situations in which the school psychologist is obligated to share confidential student-client disclosures with others: (a) when the student requests it, (b) when there is a situation involving danger to the student or others (e.g., potential suicide, suspected child abuse or neglect, a student who is a danger to others), and (c) when there is a legal obligation to testify in a court of law (Hummel, Talbutt, & Alexander, 1985). (See "privileged communication" in Jacob-Timm and Hartshorne (1998) for a discussion of the circumstances under which a psychologist must disclose confidential information in a legal proceeding).

Generally, under state statutory law and case law, school personnel have a legal obligation to take steps to ensure the safety of pupils under school supervision. In addition, in many states, therapists have a legal duty to take reasonable steps to prevent anticipated harm when the client is a danger to self or others (e.g., *Tarasoff v. Regents of California*, 1976). Consequently. school psychologists may be legally as well as ethically obligated to disclose confidential information if the disclosure is necessary to protect the client or others from harm (NASP-PPE, III, A, #9). Courts cases (e.g., *Eisel v. Board of Education of Montgomery County*, 1991) have been interpreted to suggest that school personnel have little discretion regarding whether to contact parents once information suggests a potential student suicide. Parents must be warned when there is any reason to believe a pupil has suicidal intentions. Also, when a student is determined to be a threat to another pupil, the intended victim and the parents of the intended victim should be notified. School professionals also are legally required to report suspected child abuse to a child protection agency.

Thus, school practitioners are obligated to share student confidences with others in situations involving potential student suicide or other self-injurious behavior, students who are a threat to others, and suspected child abuse. In addition, students may report any number of behaviors that, although not immediately dangerous, have the potential to be so (e.g., substance abuse, eating disorders, risky sexual behaviors). Determining an appropriate course of action in such situations can be difficult. However, if it becomes apparent in working with a student-client that confidentiality must be broken, the decision to divulge confidential information should be discussed with the student-client if possible.

Confidentiality and Collaboration

School psychologists may provide direct services to the student-client. However, they typically work in collaboration with teachers, parents, and others to assist the student, a situation that complicates the translation of the principle of confidentiality into appropriate action. In collaboration, the individuals involved generally carry joint responsibility for assisting the pupil, and information to assist the student will most likely be shared by those involved in the collaborative effort. At the onset of offering services, the psychologist needs a clear prior agreement about confidentiality and the limits of confidentiality with those involved in the collaborative effort (NASP-PPE, III, A, #11; B, #2; C, #6). If information received in a confidential situation is subsequently disclosed in order to assist the teacher or parent in meeting the needs of a student, it is recommended that *only generalizations, rather than specific confidences*, are shared (Davis & Sandoval, 1982; also NASP-PPE, III, A, #10). Furthermore, generalizations are shared with others involved in the collaborative effort only if those generalizations "are essential to the understanding and resolution" of the student's difficulties (Davis & Sandoval, 1982, p. 548). For example, it is not appropriate to disclose a child's list of reasons why the child dislikes a new step-parent; however, it may be helpful to disclose that the child is experiencing difficulty adjusting to a new family situation along with exploring strategies to facilitate adjustment.

Confidentiality and Teacher Consultation

In providing consultation services, the school psychologist works with a teacher or another school professional to aid in professional functioning (e.g., classroom management). The parameters of confidentiality must be discussed at the onset of the delivery of services, and, at a minimum, teachers should clearly understand what and how information will be used, by whom, and for what purposes. The psychologist also should have a prior agreement about those parameters with others in the school setting (NASP-PPE, III, A, #11).

In general, in consultation with the teacher or other school staff, the guarantees of client confidentiality apply to the consultant–consultee relationship (Fanibanda, 1976). All that is said between the psychologist and consultee is kept confidential by the psychologist, unless the consultee requests information be disclosed to others (Davis & Sandoval, 1982). Violation of confidentiality in consultation with teachers or other staff is likely to result in a loss of trust in the school psychologist and impair his or her ability to work with the consultee and others.

In providing consultative services to teachers, ethical responsibility requires that limits to the promise of confidentiality be identified. Thus, for example, the practitioner may want to ensure a prior agreement that the consultant may breach confidentiality in those unusual instances when the consultee "chronically and stubbornly" persists in unethical activities (Conoley & Conoley, 1982, p. 216). However, "Before breaching confidentiality, the consultant must have expended all resources at influencing the consultee to take collaborative action" (Hughes, 1986, p. 491). Such a breach of confidentiality should be given careful consideration, and would only be appropriate when the consultee's actions are harmful or potentially harmful to students. "The consultee's approach toward the client actually must be detrimental to the child rather than a less than optimal approach" (Hughes, 1986, p. 491). The consultant is obligated to discuss the need to disclose confidential information with the consultee prior to disclosure.

Psychoeducational Assessment

School psychologists are trained to be knowledgeable of the multiple factors that affect learning and behavior. As pupil advocates, they work with teachers and others to remedy pupil learning and behavior problems in the classroom prior to seeing a child for psychological assessment. As Messick (1984) has noted, ethically, a child should not be exposed to the risk of misdiagnosis unless deficiencies in instruction have first been ruled out.

Five broad ethical-legal concerns emerge from an analysis of ethical codes, professional standards, and federal laws that address psychological assessment: Psychologists must strive to ensure that psychoeducational evaluations are ***multifaceted***, ***comprehensive***, ***fair***, ***valid***, and ***useful*** (Jacob-Timm & Hartshorne, 1998).

MULTIFACETED

Psychoeducational assessment of a child with learning or behavior difficulties must be based on a variety of different types of information from different sources. Practitioners "use multiple assessment methods such as observations, background information, and information from other professionals, to reach comprehensive conclusions" (NASP-PPE, C, #3). No decisions should be made on the basis of a single test score. Primary emphasis is given to scores and information from the most reliable and valid sources in interpretation and decision making. Diagnostic hypotheses are confirmed or abandoned by collecting additional information that verifies (i.e., cross-validates) or disconfirms the hypothesis (Kaufman, 1994).

COMPREHENSIVE

Children with learning or behavior difficulties should be assessed in all areas related to the child's difficulties, including, if appropriate, health, vision, hearing, social and emotional status, cognitive abilities, academic performance, communicative status, and motor abilities.

FAIR

In the selection of assessment tools, psychologists strive to choose the most appropriate instruments and procedures in light of the child's age, gender, native language, disabilities, and socioeconomic, cultural, and ethnic background (NASP-PPE, IV, C, #1). Evaluation procedures must be selected so that a child with disabilities is not penalized on measures of cognitive ability, achievement, and adaptive behavior because of failures owing to disability. When students have limited English proficiency, language proficiency information should be gathered and used to guide the selection and interpretation of assessment tools.

Ethical codes, professional standards, and special education laws also mandate *nonbiased* assessment of children from minority cultural, ethnic, and racial backgrounds (NASP-PPE, IV, C, #1). Practitioners are obligated to evaluate research evidence indicating whether a test or procedure is equally valid when used with children from differing ethnic backgrounds, and choose the fairest and most appropriate instruments available (Reynolds, Lowe, & Saenz, 1999). In order to minimize bias in administration, interpretation, and decision making, school psychologists must be keenly sensitive to culture and ethnicity as factors that impact on behavior (American Psychological Association, 1993). Furthermore, if testing and assessment practices result in children from a particular ethnic group being placed in inferior programs, then the outcomes or consequences of testing are biased and unfair (Reschly, 1997).

VALID

The *Standards for Educational and Psychological Testing* (Standards) (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 1999) provide guidelines for psychologists and educators to use in evaluating whether their tests and assessment procedures meet acceptable technical standards. Evaluation of the technical adequacy of assessment instruments and procedures involves consideration of the evidence for test reliability, validity, and the adequacy of the standardization norms. School psychologists are obligated to select tests and other evaluation procedures that meet high professional standards and are valid for the purpose for which they are used (NASP-PPE, IV, C, #2). They are also obligated to ensure instruments are administered and interpreted by qualified examiners in a manner consistent with sound professional practice (NASP-PPE, IV, C, #5).

USEFUL

Evaluation instruments must be selected to provide a profile of the child's strengths and difficulties to aid in instructional planning. The assessment is planned to ensure the information gathered will result in maximum feasible assistance to the child (NASP-PPE, IV, C, #2, #7).

School psychological assessment often results in the assignment of a formal diagnostic label. Legally and ethically, practitioners are obligated to ensure that when labels are assigned they are based on valid assessment procedures and sound professional judgment. When labels are used, "The least stigmatizing labels, consistent with accurate representation, should always be assigned" (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 1999, p. 88).

The school psychologist shares findings through the written report and in conferences with the parent, student, and teacher. In accordance with FERPA, parents have access to psychological reports. Consequently, the writer must take into account the fact that reports will be read by professionals and nonprofessionals. Reports should emphasize recommendations and interpretations rather than a simple passing along of test scores (NASP-PPE, IV, D, #3).

This section focused on ethical-legal concerns associated with psychoeducational assessment of individual pupils. Readers may wish to consult Jacob-Timm and Hartshorne (1998) for a discussion of ethical-legal issues associated with school testing and assessment programs, and see Ysseldyke, Nelson, and House (2000) and the Standards (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 1999) for guidelines pertinent to participation of students with disabilities in statewide and district-wide testing programs.

Intervention

In recommending interventions, psychologists strive to propose a set of options for consideration by the parents, student, and others involved in intervention decision making (NASP-PPE, III, C, #1, #5). The proposed options should consider all resources (school and community) available to assist the student and family; and take into account the objectives of the school and classroom, the support and assistance that can be made available to the teacher, and the values and capabilities of the parents (NASP-PPE, III, C, #1, #3, #5).

School psychologists recommend intervention techniques "that the profession considers to be responsible, research-based practice" (NASP-PPE, IV, C, #4). Furthermore, psychologists offer to provide only those services that are within the scope of their own competence and training. If needed interventions are not within their realm of expertise, then the practitioner enlists the assistance of other specialists in a supervisory, consultative, or referral role (NASP-PPE, II, A, #1). Consistent with the ethical principle of responsible caring, school psychologists monitor (or assist in monitoring) the effectiveness of the interventions selected, and "modify or terminate the treatment plan when the data indicate the plan is not achieving the desired goals" (NASP-PPE, IV, C, #6).

In recent years, the use of behavioral assessment and intervention techniques has gained popularity in the public schools, in part because of changes in special education law (IDEA). In accordance with the 1997 amendments of IDEA, if a student with disabilities is subject to a disciplinary suspension from his or her regular placement for more than 10 days, then the Individualized Education Program (IEP) team must modify the student's behavior plan (if he or she has one) to address the problem behavior. If the student does not have a behavior plan, then the IEP team must conduct an assessment to determine the function the behavior serves (a functional behavioral assessment (FBA)), and design a behavior intervention plan based on the FBA. The following paragraphs consequently focus on special concerns associated with the problem clarification and intervention stages of behavioral interventions for students with problem behaviors. Readers interested in ethical-legal issues associated with other types of interventions (e.g., counseling, psychopharmacologic) may wish to consult Jacob-Timm and Hartshorne (1998), Bersoff (1999), or Koocher and Keith-Spiegel (1998).

An ethical concern that arises during the problem clarification stage is whether the goals of intervention are in the best interests of the child. Classroom behavior modification programs introduced in the late 1960s often focused on teaching children to "be still, be quiet, and be docile" (Winett & Winkler, 1972), what Conoley and Conoley (1982) later referred to as "dead man behaviors." Such goals may assist the teacher in maintaining a quiet, orderly classroom, but they are not likely to improve learning or foster the healthy personal-social development of children (Winett & Winkler, 1972). The psychologist and teacher are ethically obligated to select target behaviors that enhance the long-term well being of the child and are consistent with the long-range goal of self-management. Goals must be selected to ensure that the pupil will develop appropriate adaptive behaviors and not just suppress inappropriate ones.

During the intervention stage, school psychologists are ethically obligated to select (or assist in the selection of) change procedures that have demonstrated effectiveness. Practitioners also are obligated to select the least drastic procedures, and those that minimize the risk of adverse side effects, that are likely to be effective (NASP-PPE, I). There is some consensus in the literature about the procedures that are the most acceptable, and those that are least acceptable in the schools. First-choice strategies are based on differential reinforcement (e.g., reinforcing appropriate behaviors incompatible with problem behaviors). Second-choice strategies are based on extinction (withdrawing of reinforcement for undesired behavior). Third-choice strategies include removal of desirable stimuli (e.g., time-out procedures). The least acceptable (fourth choice) strategies are those that involve presentation of aversive stimuli.

The courts have scrutinized the use of behavioral interventions with schoolchildren. Such methods must not deprive pupils of their basic rights to food; water; shelter, including adequate heat and ventilation; sleep; and exercise periods. Time out is a popular intervention strategy, and the courts have found its use in the schools to be permissible. However, practitioners are ethically obligated to ensure time out is used in a manner that safeguards the rights and welfare of pupils. More specifically, school personnel must monitor a secluded student to ensure his or her well being, the time-out room itself must not present a fire or safety hazard, the door must remain unlocked, and students must be permitted to leave time out for appropriate reasons. Students should be given prior notice about the types of behaviors that will result in being placed in time out, and school personnel must ensure that time out, when used as punishment, is "not unduly harsh or grossly disproportionate" to the offense (*Dickens by Dickens v. Johnson County Board of Education*, 1987, p. 158). The court in *Dickens* noted that "prolonged, uninterrupted confinement" in time out might be a violation of a pupil's legal rights (his or her liberty interests and right to education) (p. 159). Creating a time out by segregating or secluding the child within the classroom, or requiring the child to do schoolwork while in the time-out room, is recommended (*Dickens*, 1987). Furthermore, as behavioral experts have cautioned, the length of the time out should be appropriate for the child's age and developmental functioning.

A highly controversial issue in the schools is the use of aversive conditioning, where a discomforting stimulus is presented contingent upon the child's undesirable behavior. Aversive therapy should only be considered in the treatment of behaviors that, if allowed to continue, would have far worse consequences than the therapy (e.g., self-biting, head banging, or other seriously maladaptive behaviors). It is typically considered to be a last resort strategy, legally permissible and ethically appropriate only after all else has failed (Jacob-Timm, 1996). Green (1990) developed guidelines to follow to ensure behavioral interventions, particularly those involving aversives, are safe and humane, respectful of individual rights and dignity, and used only in ways likely to benefit the student (also see Repp and Singh, 1990).

SUMMARY

Ethical choices in professional practice are best made on a critical-evaluative level. Decisions made on a critical-evaluative level involve thoughtful consideration of general ethical principles and professional codes of ethics. A decision is likely to be viewed as ethical if it is based on generally accepted ethical principles, if it is a reasoned outcome of a consideration of the principles, and if it is universalizable to other similar situations.

Four broad ethical principles pertinent to the delivery of school psychology services were identified. The first was respect for the dignity of persons. Consistent with this principle, psychologists value client autonomy and safeguard the client's right to self-determination, respect client privacy and the confidentiality of disclosures, and are committed to fairness and nondiscrimination in interactions with the client and others. The second broad principle was responsible caring. According to this principle, practitioners are obligated to work within the boundaries of their professional competence and accept responsibility for their actions. The third broad principle was integrity in professional relationships. According to this principle, psychologists are candid and honest about the nature and scope of the services they have to offer and work in full cooperation with other professionals to meet the needs of children in the schools. The fourth broad principle was responsibility to community and society. School psychologists recognize that the profession exists within the context of society and work to ensure that the science of psychology is used to promote human welfare.

In addition to these broad principles, practitioners should be familiar with the more specific principles and rules outlined in NASP's *Principles for Professional Ethics* and APA's *Ethical Principles of Psychologists and Code of Conduct.*

School psychologists with a sound knowledge of ethics are likely to anticipate and prevent ethical problems from arising. However, not all problem situations can be anticipated or prevented. Use of an explicit decision-making procedure may help the practitioner make informed, well-reasoned, choices in resolving problems when they do occur.

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A text that discusses the ethical issues psychologists encounter in a variety of practice settings, research, and teaching. The book focuses on the American Psychological Association's (1992) *Ethical Principles of Psychologists and Code of Conduct* and may be particularly helpful for practitioners in independent practice.

National Association of School Psychologists. (2000). *Professional conduct manual*. Bethesda, MD: Author. Available:

Contains both the *Principles for Professional Ethics* and the *Guidelines for the Provision of School Psychological Services*. Required reading for practitioners and supervisors of school psychological services.

APPENDIX: APPLICATION OF AN ETHICAL DECISION MAKING MODEL

The following paragraphs illustrate the thinking of a fictitious school psychologist as the psychologist applies an ethical-legal decision-making model to a problem situation:

1. Describe the parameters of the situation.

When I stopped in the high school office after lunch to pick up my mail and messages, I noticed Brad, a 15-year-old special education student, in the principal's office, visibly upset and agitated, and the principal, Mr. Scott, on the phone. Brad is a learning-disabled student who has a history of emotional problems, including impulsivity, depression, and threats of suicide. The secretary informs me that Brad has just been suspended from school because he harassed another student and then threatened the teacher who reported the incident. The secretary goes on to say that Mr. Scott has "had it with Brad," and is calling for transportation to take him home immediately even though she has been unable to contact the parents and there is no one at home.

2. Define the potential ethical-legal issues involved.

Concern for protecting the welfare of students is my top priority in providing services.I'm worried that if Brad is sent home upset and unsupervised, he may harm himself or others.

3. Consult available ethical-legal guidelines; consider broad ethical principles as well as specific mandates.

No time to consult guidelines, but I know:

- School discipline is the principal's responsibility; school discipline is not my job.
- Students are my primary responsibility, and I am ethically obligated to advocate for their well-being, even if such advocacy creates conflicts with school administrators.
- School district policy requires parent contact before students are sent home for disciplinary reasons.
- The district's safe school plan requires assessment of an individual pupil if he (or she) makes threats to self or others, or is suspected to be a danger to self or others.

4. Evaluate the rights, responsibilities, and welfare of all affected parties.

- To ensure Brad's safety and the safety of others, Brad should be helped to calm down before he goes home, and he should be evaluated to determine whether he poses a threat to himself or others. Outcome of the evaluation will determine the most appropriate course of action (e.g., it may be necessary to have Brad's parents to come to school for a conference and to pick him up).
- Brad's parents have a right to be notified of the situation as soon as possible.
- Although the principal has the authority to suspend Brad, he is violating district policy if he sends Brad home prior to parent notification and prior to a threat assessment. The principal puts himself and the school at risk for a lawsuit if Brad is sent home unsupervised and there is injury to Brad or others.

5. Generate a list of alternative decisions possible for each issue.

- I can respect the principal's decision and do nothing.
- I can intervene by asking the principal to talk with me privately about Brad's situation as soon as he is off the phone.

6. Enumerate the consequences of making each decision.

7. Present any evidence that the various consequences or benefits resulting from each decision will actually occur.

- If I do nothing, then Brad will go home to an empty house, and perhaps nothing will happen. I know, however, that school suspension is sometimes a trigger for suicide or acting out among troubled youth. If Brad expresses his anger by harming himself or others, then the psychological and emotional costs to all will be unacceptably high.
- If I intervene, then it may impair my working relationship with the principal, because he may feel his authority and judgment have been challenged and that I have overstepped the boundaries of my job role.

8. Make the decision.

Even though it is uncomfortable for me, I will intervene. I will discuss the reasons why sending Brad home to an empty house is not advisable, and remind the principal that parent contact is required prior to sending a student home for disciplinary reasons. I will ask to conduct a threat assessment of Brad in accordance with the district's safe school plan.

Note. Model adapted from Ethics in Psychology (2nd ed.), by G. P. Koocher and P. Keith-Spiegel (1998, pp. 12–15). Situation adapted from *Armijo v. Wagon Mound Public School Board*, 159 F.3d 1253 (10th Cir. 1998).

6

Best Practices in Applied Research

Timothy Z. Keith
Alfred University

OVERVIEW

Why bother with a chapter on research? Conventional wisdom is that school psychologists are not interested in conducting research, and that many are antagonistic toward research. Yet my experiences teaching, conducting workshops, and writing about research lead me to believe that the conventional wisdom may be conventional, but not wise. I have talked to many school psychologists who are indeed interested in conducting research in applied settings, and to many more who want to do a better job of incorporating others' research into their daily practice. Both of these are appropriate research roles for school psychologists. This chapter will examine three hierarchical research roles for school psychologists and discuss the skills needed to fulfill those roles.

For the purpose of this chapter, research is defined as activities designed to produce new scientific knowledge or to use that knowledge to improve school psychological practice. I see three hierarchical research roles for school psychologists:

1. All school psychologists should strive to be competent *consumers* of research. The populations we serve, our methods and our instruments, and our roles are constantly changing. At the same time, there are always plenty of bandwagons tempting us to hop aboard. The best way to stay abreast of current developments while avoiding bandwagons is the careful reading of research. Research tells us which good ideas really *do* work.

2. There is also a need for a smaller number of school psychologists to act as *distributors* (or synthesizers or disseminators) of research. They may read research relevant to a topic of interest and summarize and draw conclusions from it for other interested groups, such as other psychologists or a Board of Education.

3. Some school psychologists are interested in performing the role normally considered research: *conducting* research of interest to themselves, their colleagues, or their employers.

The three roles are hierarchical because one needs to be an effective consumer of research to summarize and distribute research effectively, and one needs to be able to summarize research to be an effective conductor of research.

As an example, consider three school psychologists interested in the effectiveness of study skills instruction. John, a research consumer, is interested in study skills instruction as an educational intervention for a low-achieving child. He reads research to find out if study skills instruction is generally effective in improving achievement, which methods of instruction are available, and whether some methods are generally more effective than others or whether some methods are more effective with children similar to the one with whom John is working. Elaine, a research distributor, is asked by her superintendent to investigate whether it would be worthwhile to teach study skills to incoming high school students and, if so, which approach would be most effective. Finally, Carolyn conducts research comparing the achievement of students in her district who were taught study skills to the achievement of children who were not taught such skills.

BASIC CONSIDERATIONS

The Consumer of Research

Although social science research is often contradictory, research is also the one way we have of putting aside our hopes and prejudices and testing whether or not an intervention is effective. To serve children well, psychological practice needs to be consistent with research findings. Yet research is contradictory, and much research is of poor quality and limited applicability. School psychologists thus need to evaluate the research they read in order to separate the wheat from the chaff.

To evaluate research, we should ask two essential questions: Did the research demonstrate anything, and is it applicable to my situation? The training needed to become a competent consumer of research is not extensive and is probably included in most specialist-level school psychology programs. Basic statistics, research, and measurement courses are needed, but those courses should focus on a *conceptual* at least as much as a numerical understanding. Unfortunately, many such courses continue to be taught as if most students were going to be conducting research rather than reading and evaluating it; more attention is needed toward the *evaluation* and use of others' research. Single-case research methods also need more coverage. This is one research method that all practitioners can use, but its coverage is spotty. The primary resource needed by consumers of research is access to relevant journals.

The Distributor of Research

Although all school psychologists should strive to incorporate research results into their practice, all do not need to integrate and distribute research to others or to conduct research; and whether one wants to become a distributor or conductor of research should be a matter of choice and job description.

Distributors of research first need to be good consumers of research, and they additionally need experience sifting through and integrating research findings that may be rather diverse and inconsistent. Their formal training should also include, at minimum, basic courses in research, statistics, and measurement, and guided experience in integrating and summarizing research is probably at least as important. All doctoral and many specialist-level psychologists should have this level of training and at least some experience, at minimum, when writing a thesis or dissertation.

Research distributors need access to a wider range of journals and other sources of research: conferences at which research is presented, the ERIC Document Reproduction Service, and Psychological Abstracts. Electronic databases such as ERIC and PsycInfo—to be discussed in more detail later in this chapter—can enhance greatly the effectiveness of research distributors by providing the ability to search a broad range of journals. Access to a university library is also extremely useful.

The Conductor of Research

It is well known that not all school psychologists are interested in conducting research, but this role should—and often is—available to psychologists with the appropriate interest and training. Again, these roles are seen as hierarchical; we need to be competent distributors of research in order to be good conductors of research, because the conclusions drawn from previous research should guide our own research efforts.

The formal training of those who plan to conduct research needs to be more extensive, and should include a series of research methods and statistics courses. Nevertheless, most doctoral level and some specialist-level psychologists have completed such coursework. Thus, your interests and experiences may determine whether or not you take on this role more so than your previous coursework. Probably the best training for this role is to assist someone else in several research projects or to conduct several research projects under supervision (in addition to a thesis or dissertation). A graduate research assistantship or some sort of research apprenticeship can be extremely valuable.

The conductor of research needs access to the same resources as the distributor of research: research publications and a good library. In addition, most psychologists who conduct research need access to a computer with a good statistical analysis program.

Program Evaluation

Although relatively few school psychologists may be interested in the conducting and publication of research, many more should be interested in the related skill of program evaluation. Schools, clinics, hospitals, and other agencies develop and implement programs on a regular basis, but efforts to evaluate the effectiveness of those programs are all too irregular. Program evaluation is badly needed, and school psychologists are often among those most capable of providing that evaluation. I simply note here that program evaluation falls under the category of conducting research; the skills required for effective program evaluation are the same as those needed to be an effective conductor of research.

BEST PRACTICES

Consumers

READING AND EVALUATING RESEARCH

Consumers of research read and evaluate research as a means of improving their practice. In order to perform this role we must, of course, have access to relevant studies. Consumers must also be able to evaluate the research they read. Much research in the social sciences is contradictory, and an effort to find the empirical answer to a question of practice can be quite frustrating. I do not believe this inconsistency means that research cannot inform our practice. It does mean, however, that evaluation of the research is necessary.

Journals, the primary source of research, accept only a fraction of the articles that are submitted for publication, thus supposedly ensuring that published research is of high enough quality to deserve our trust. Nevertheless, much research, even that published in good journals, is not good research. Research problems are poorly conceived or are trivial; samples are small and poorly selected; inappropriate statistics are used, or mistakes are made in calculating and reporting statistics; research designs are weak and do not rule out plausible alternative hypotheses; designs neither fit the purpose of the study nor test the hypotheses the researcher wants to test. Even when research is well-conceived and conducted, there are problems of interpretation. Most researchers have been guilty of overblown conclusions that extend well beyond what might reasonably be concluded by the results, but more subtle problems are common as well. It is not unusual, for example, for a discussion to address a different issue than that addressed by the design! This problem is common when there is a mismatch between the intended purpose of the research and the research as actually conducted. For all of these reasons, much research is of marginal quality, and consumers need to evaluate carefully the research they do read.

Fortunately, we do not have to be a statistician to evaluate research. Instead, what is needed is a conceptual understanding of research methods and what those methods can tell you. What is the purpose of a representative sample? Of random assignment to groups? When is research experimental and when is it non-experimental? What threats to validity does a multiple baseline design control? What does statistical significance mean? What does analysis of variance, or multiple regression, or factor analysis tell us? Being able to answer these conceptual questions will help us evaluate research much more so than being able to calculate t-tests by hand. We also need to read research articles carefully—even skeptically.

Research evaluation focuses on a number of different aspects of the research, but there are three very important considerations. First, are the internal features of the research conducted well enough so that we can have confidence in the results? The consideration is generally referred to as internal validity (Campbell & Stanley, 1963), but may also be thought of as the "power" of the research design (Keith, 1988). In other words, is the research design powerful enough so that we can be confident that it was the *treatment, and not something else*, that caused a change in behavior?

Second, how generalizable or applicable are the results? This consideration—external validity—focuses primarily on the subjects and treatments used in the research. Are the people participating in the research study similar to those we might encounter during normal practice? Are the treatments used similar to those we might use in applied settings, or have they been modified drastically to fulfill the requirements of the experiment? There is often a trade off in these two aspects of research. For example, a school-based study in which various classes were assigned differing amounts of homework would likely be less powerful (more threats to internal validity) than a lab-based experiment in which college freshmen were assigned randomly to groups and given different amounts of time to study nonsense words. On the other hand, we would probably feel more comfortable generalizing the results of the first study to a middle school student who does not complete his homework. The second study is more powerful but less generalizable.

Third, is the article written well enough so that readers can understand what was done and the implications of the results? It does not matter how technically sophisticated research is if the writing is unclear and confusing.

Although skepticism is necessary in evaluating research, it should not be carried to an extreme. Be warned: *No research is perfect!* Conducting research consists, in large part, of making decisions and compromises, and there are weaknesses in any piece of research. When we evaluate research we need to weigh its strengths and weaknesses and decide whether the results obtained are trustworthy, whether the treatment described really resulted in the observed behavioral change. On evaluation we will find some research in which the weaknesses are insurmountable, and the results suspect; these studies should be ignored. The rest will fall along a continuum from merely adequate to excellent. We can apply those that are strong in all areas with more confidence than we can those with many weaknesses.

Table 1 includes a list of questions that may be useful in evaluating research articles (see also Cone and Foster, 1993, chap. 7, or Isaac and Michael, 1995, chap. 9). Various sources that may be useful in gaining a conceptual understanding of the issues involved in research are listed in the annotated bibliography.

For research that is well-conducted and well-described, the next problem is application. It is obviously easier to apply applied research than research that is highly theoretical. Intervention studies and psychometric research are often directly applicable to daily practice. But basic and theoretical research may also be quite applicable, especially if it helps us understand how or under what conditions a treatment (or intervention) may be useful. Basic research comparing the effectiveness of various mnemonic devices for different types of subjects might be quite applicable to a student with poor memory skills, for example.

Table 1. Questions for evaluating research articles

- Is the purpose well defined?
- Is the literature adequately summarized?
- Does the introduction establish the need for the study?
- Is the research design appropriate? Is it powerful enough so that you can trust the results?
- Does the research design fit the purpose?
- What type of research design is used (experimental, quasi-experimental, non-experimental, single-case, etc.)?
- Does the analysis fit the design?
- How was the sample collected? Is it representative of the population? Is it large enough to allow a good statistical test?
- Is there evidence to support the reliability and validity of any tests or questionnaires used?
- Are the results presented consistent with the purpose, the design, and the analysis?
- Does the discussion flow from the results? Is it consistent with the purpose of the study?
- Are the conclusions consistent with the results, or do they go well beyond them?
- Are the limitations of the research discussed?
- What are the major strengths and weaknesses of the study?
- Is the article well written?
- Are the results of the study generalizable to your population? Are the treatments generalizable into interventions?
- Is this research applicable to your work?

Note. These questions provide an overview of those aspects that may be important in evaluating research articles. They will not all be equally applicable for all articles.

The connection is not as direct, but a good mix of applied and basic research may be very useful in understanding a problem.

SOURCES FOR CONSUMERS OF RESEARCH

The primary sources of research reports are journals with relevance to school psychology. A useful list of journals with relevance to school psychology is presented in many introductory school psychology textbooks. Conferences, conference proceedings, and the ERIC Document Reproduction Service are other outlets for relevant research, but these manuscripts are generally not as carefully reviewed as are those submitted to journals, so consumers of research need to be even more critical than with journal articles. Research reviews and book chapters are another good source for both consumers and distributors of research. This volume and *Children's Needs II: Development, Problems, and Alternatives* (Bear, Minke, & Thomas, 1997) provide good starting points for many topics. If well done, reviews and chapters provide a concise, objective summary of research knowledge in an area, and their reference lists also provide good listings of the original research. These sources may also provide a good conceptual introduction that will be useful when reading the original research. But like all research, the quality of reviews and chapters varies considerably; you should have some familiarity with at least some of the original articles so that you can be sure that the writer of the review did a competent job of summarizing the research.

If most school psychologists are to be research consumers, rather than conductors, then their concern when taking research courses should be for a conceptual understanding of research. I believe there is one exception to this rule: All school psychologists should be able to develop basic single-case research designs. In my opinion, school psychologists do not need to conduct complex single-case research (although such research is often more applicable to applied settings than are many other types of research), but knowledge of such designs is useful because they can be used to evaluate the effectiveness of virtually *any intervention*—behavioral or otherwise.

AN EXAMPLE: USING RESEARCH TO DEVELOP AN INTERVENTION

As an example, a school psychologist is referred a fifth-grade boy, Sam, who is having trouble keeping up with his peers. The teacher does not think Sam is a candidate for special education, but does want assistance in helping him deal with what appears to be a relatively mild learning problem. Assessment and a review of records support the teacher's suspicions; that is, Sam has never been a star student, but he has never experienced serious problems before either, and has never been referred previously. He appears to have slightly below-average abilities and achievement in a generally high-achieving school. Assessment also suggests that Sam, his teacher, and his parents are all fairly motivated and will be willing to cooperate with some sort of intervention.

The school psychologist has read several articles recently on the effects of homework, and it occurs to her that homework might provide the basis for a cooperative home/school intervention. A cursory review of research suggests that homework is fairly effective for this age group, especially when it is commented on by the teacher and when current homework demands are small (e.g., Keith & DeGraff, 1997). Further investigation reveals that the teacher currently assigns little homework, and thus a homework intervention seems a likely possibility. Additional reading suggests worthwhile features of effective homework interventions (Miller & Kelley, 1991)

The psychologist begins conducting Curriculum-Based Assessments in Reading (e.g., Shapiro & Elliott, 1999) and charting Sam's weekly quiz grades in math and spelling. In cooperation with the teacher and the parents, she plans a homework intervention: The parents will provide a quiet place for Sam to study at a regular time each day; and the teacher will eventually provide daily, individualized homework in at least two of the three areas being charted, and will check the homework, comment on it, and provide feedback to the parents about Sam"s homework accuracy on a daily basis. The parents, in turn, will provide reinforcement at home for homework that meets an agreed upon, adjustable criterion of accuracy (as reported by the teacher).

Because the psychologist wants to ensure it is the intervention, rather than some other, uncontrolled influence that causes any subsequent change in Sam's achievement, she designs the intervention as a multiple baseline design across school subjects. Homework in reading is introduced first, although performance in all three areas continues to be charted. If the intervention is effective, then she might expect to see improvement in reading after a few weeks of the homework intervention while spelling and math grades stay at about the same level. Homework could next be introduced in spelling and, after progress was shown, in math. Of course, if the homework seemed effective in reading, then the teacher and parents might be tempted immediately to begin homework in the other two areas, but they would need to be cautioned against jumping the gun. By conforming to the multiple baseline plan, the psychologist can feel confident that it is the intervention, and not something else, that is causing any change in Sam's behavior. This knowledge is important because it provides information that may be useful in future interventions with Sam and with other students and because it ensures that Sam, his parents, and his teacher are not completing all of this additional work for no purpose. This approach has the added benefit of introducing the intervention gradually and of providing data that may be used to make needed changes in the intervention. The approach is not a sophisticated single single-case design, but it would provide evidence of the effectiveness—or lack of effectiveness—of the intervention. The example also illustrates the intimate connections among research, assessment, intervention, and evaluation. It should also be noted that a wide range of outcome measures (behavioral and otherwise) are possible in single single-case designs. For example, if we were interested in the teacher's impressions of Sam's preparation for class, then we could assess this possible outcome by using a simple rating scale. These daily ratings of preparedness in the three subjects would also fit well in the multiple baseline design.

IMPROVING SKILLS: CONSUMERS

Most school psychologists have had the necessary training to become effective *consumers* of research; what they need is to improve and use these skills. The books and articles in the annotated bibliography may help refresh that training, and they approach research more from a conceptual than a numerical level. Consumers should also read research regularly and attend research presentations at conferences. We school psychologists should be interested in the results of research, but always approach it skeptically. As Reynolds, Lowe, and Saenz (1999, p. 549) reminded us, our attitude should be, "In God we trust; all others must have data."

Of course, if school psychologists are to be effective consumers of research, their employers must recognize this as a part of the job. In my experience, most employers are pleased when their psychologists try to base their practice on solid research, provided that the knowledge (a) does not cost a lot of extra money and (b) is not used as a weapon with which the psychologist battles policies of the administration (as in, "*Well, the research says this program the superintendent started up last month is not very effective.*"). As with any new role, it may be necessary to start this process through an investment of one's own time rather than the employer's; when you can show some payoff—as through effective interventions—your employer will be much more willing to recognize the value of the research consumer approach.

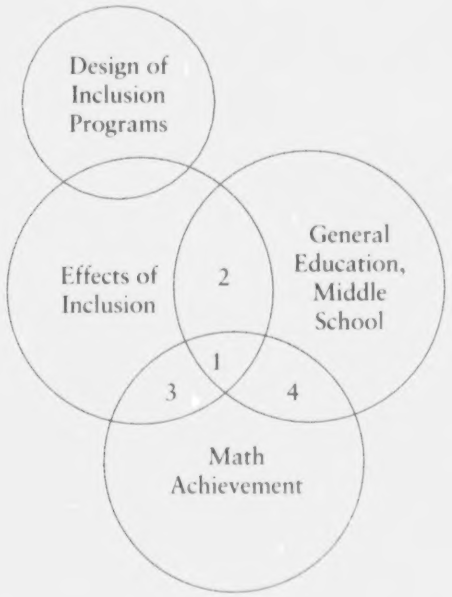
Distributors

INTEGRATING RESEARCH FINDINGS

Distributors of research consolidate and integrate research findings in order to draw conclusions and make recommendations based on those conclusions. To do so, distributors first need access to a body of research, and a wider access than do consumers of research. Distributors need to be able to define their research topic so that their review is neither too broad nor too narrow. I find it helpful to organize research topics as a group of overlapping circles or ovals. For example, if I were interested in the effects of inclusive classroom settings on general education middle school students' math achievement, then I would be most interested in research that directly addressed that question, and I would want to read and evaluate that body of research as comprehensively as possible. Thus, my central topic—and the area of quadruple overlap (marked with the number 1) in Figure 1—is research addressing the effects of inclusion on general education, middle school students' math achievement.

I would also be interested in several related topics, such as the effects of inclusion on other academic areas, the effects of inclusion on the achievement of all students, and other influences on the math achievement of general education middle school students; those topics are represented by the areas of double overlap of the circles (marked 2, 3, and 4, respectively). Although each of these related topics is of interest, they are less central to the main topic of interest, and therefore my reading of research in these

Figure 1. Topics included in a review of the effects of inclusion programs on the mathematics achievement of middle school, general education youth. The farther the topic is from the area of central overlap, the less extensive the review.


Design of Inclusion Programs
Effects of Inclusion
General Education, Middle School
Math Achievement
1
2
3
4

areas would not need to be as comprehensive. Much of my information about these topics could even rely on review articles, if they were well done, comprehensive, and recent. Next I would focus on the individual circles (e.g., effects of inclusion) outside the areas of overlap; such topics might receive only a cursory review. Likewise, I would also address other, related areas, such as the design of inclusion programs. Thus, although my reading of the research should cover all important aspects of the problem, I would also spend less time on that research that was less central to my research question.

Like consumers, distributors of research need to be able to evaluate the research they read. In fact, this skill is even more important for distributors because they need to cover the research more thoroughly and are therefore more likely to encounter contradictory findings. Distributors need to weigh better research more heavily in making conclusions. That is, they should base their conclusions primarily on the better research, only using the medium-quality research when it addresses important questions unanswered by better conducted studies.

Probably the most difficult part of consolidating research is *integrating* diverse research findings. The least useful review of research is one that simply lists in separate paragraphs the findings of each research study. Instead, the goal of a research review should be to combine and *integrate* the various research findings in order to draw one or several conclusions (with appropriate caveats) from the research. One rule of thumb is to avoid making the *researchers* the subject of a sentence or a paragraph, but rather to focus on the *findings* of research and make most citations to researchers parenthetical. For example, I might write that "coursework appears an important influence on student learning (Anderson, 1991), whether learning is measured by test scores (Sanchez, 1998) or by grades (Jones, 1997)." This sentence integrates the findings of three hypothetical studies. In contrast, I might have written: "Sanchez (1998), in a regression analysis of 867 high school students, found that the coursework taken by those students had a strong effect on their subsequent achievement test scores. Jones (1997) studied students in academic versus general high school tracts and found that ...." and so on. The first method integrates the findings; the second method treats them separately.

Likewise, the written review should rarely be a chronological presentation of the findings of research. The integrated presentation of studies should be organized in a logical fashion so as to lead to and reinforce the appropriate conclusions. This does not mean that there is one perfect way of organizing a particular review of literature, but some potential formats are certainly more effective than are others. To decide on the proper structure, some writers suggest listing each finding (with citation) on a note card and sorting the cards into different stacks to evaluate alternative organizations (Sternberg, 1993). I find that a table, summarizing the details, findings, strengths, and weaknesses of each study is often useful. Such tables can also be a helpful part of the written review.

Quantitative research synthesis, or meta-analysis, is becoming increasingly common and can be a valuable tool for research distributors. Even those who do not use the quantitative methods of meta-analysis can profit from a discussion of the considerations necessary for valid research synthesis (e.g., Wolf, 1986).

The steps listed above as important in distributing research are identical to the steps involved in a literature review: review an appropriate body of research, integrate the findings, and make conclusions. Distributors of research need to take this process one step farther, however. They are presumably conducting a research review because they wish to bring research findings to bear on some practical problem; they also are conducting the review to share with others. As a final step in such a review, a research distributor should be able to make recommendations for action based on the conclusions.

SOURCES FOR DISTRIBUTORS OF RESEARCH

Research distributors need a wider access to journals and other sources of research than do most consumers. In addition to school psychology journals, distributors need access to journals from educational psychology, special education, and behavioral, counseling, and clinical psychology. Distributors also need access to other sources of research (e.g., conference papers abstracted in ERIC, books) and they should be able to integrate basic, theoretically oriented research with applied research.

Fortunately, the legwork required of research distributors—conducting searches of the literature, finding relevant articles and books—is becoming easier and easier, thanks to the internet and computers. Most university libraries now have internet or CD-ROM access to databases of research articles. Although there are many such databases, ERIC and PsycINFO are probably the most relevant, and include abstracts and publication information from education and psychology journals. It is very easy to search multiple journals quickly for keywords of interest; the results of the search can then be downloaded to disk or printed. Obviously, these new instant searches can be a great starting place for research distributors.

Much of the work involved in distributing research can be completed before a visit to the library. Research distributors can search the holdings of most university libraries in the United States (and many outside the United States) from their home or office using the Internet. School psychology websites may provide good avenues for further investigation. ERIC is available at no charge (e.g., through the U.S. Department of Education website). Although PsycInfo is not free to the general public, it should be available to those with a university affiliation. Many universities with PsychInfo also have it available to anyone who can visit the library itself. Keep in mind that such searches usually produce only abstracts; you still need to get the actual articles of interest. For many, a trip to the university library will be the easiest way to get these. While there, you should talk with a librarian to find out what resources are available in the library itself and online.

For those without a nearby university, ERIC may be the best starting point. As I write this, members of the American Psychological Association (APA) can get access to PsychInfo and to the full text of articles in APA journals through the APA website, although there is a charge for the service. There are also services available (e.g., the Carl UnCover document delivery service or ISI document solution) that will fax or mail you the full text of articles from most academic journals. The services are not cheap, however; as this is written, charges for these services are $10 or more per article, plus copyright fee. Again, contact with a university library for more information will be worthwhile for research distributors interested in such services. These developments in technology are exciting, but please remember that electronic resources are changing rapidly. These internet sites and electronic services may change considerably by the time you read this.

IMPROVING SKILLS: BECOMING A RESEARCH DISTRIBUTOR

Psychologists interested in improving their research distributing skills may also profit from the books and articles listed in the bibliography. Research distributors should also develop the practice of critically reviewing the research they read, and should study research reviews written by others. One excellent way to practice reviewing research is to serve as a referee for articles submitted to journals. Most journal editors are eager to find colleagues who are willing to serve as occasional reviewers for research and review articles submitted for publication in their journals, and editors of school psychology journals are often especially eager to find *practitioners* willing to review articles. Most journals use anonymous reviewing (the reviewer does not know the identity of the author) in order to ensure honesty in reviews; courtesy should not be sacrificed as a result of anonymity. Serving as a reviewer provides practice and often feedback; most editors send each reviewer the comments of the other reviewers in addition to their own blinded letter to the author.

Without realizing it, most psychologists hear questions amenable to research review constantly, from parents, teachers, and administrators. *Do you think young boys should wait an extra year before starting kindergarten? Should I give homework to second graders? Does ability grouping harm low-achieving students? Should we institute a cooperative learning program in the elementary schools?* All of these questions address educational topics that have been the focus of research, and answering those questions is easier with a solid understanding of what research says about the effectiveness of the programs in question. Psychologists who wish to add the role of research distributor to their jobs can begin by volunteering to help provide answers to questions of interest to their school district or other employer, or by volunteering to serve on policy-making committees. For example, district-wide policies on homework are becoming popular; a psychologist serving as a research distributor could provide valuable information to a policy-making committee on the effects of homework on student learning.

Conductors

DESIGNING AND CONDUCTING RESEARCH

Conductors of research first need to be competent consumers and distributors of research. Beyond that, they of course need to be competent in research design and analysis. Arguably, they also need another, often overlooked skill: They should be able to transform vague questions of practice and policy into general research questions. In my experience, the most common mistake made by inexperienced researchers is the tendency to focus immediately on the details of a study (the sample, the statistics to be used); a common mistake made even by experienced researchers is vague or poorly defined research questions. The missing step in both cases is to go beyond the vague questions that led to an interest in the topic being studied and to derive *general, testable* research questions. Do you wonder what can be done to best educate disadvantaged youth, or whether low-achieving first graders should be retained? These vague questions of policy can be phrased as research questions in a variety of ways, each of which would lead to a slightly different research design. I find it helpful to force myself to phrase these vague questions as questions of 10 words or less, usually in the form of does x affect (or improve, or influence) y? *Does grade retention improve later achievement? Does an academic curriculum affect disadvantaged students' future economic success?* Once the general question has been phrased, conducting research is simply a matter of making choices (*How do we define disadvantaged?*) and compromises (*Should we use a small, but intensively interviewed local sample, or a larger regional sample with less information per person?*). With practice, you will find research questions popping up everywhere—as a result of normal conversations, articles in journals, newspaper stories and editorials, and other unlikely sources.

Conductors of research also need competence in a variety of research designs in order to ensure that the design chosen indeed tests the appropriate research question. *Expertise* in research design is not necessarily needed if you are willing to collaborate or seek the advice of someone with that expertise, but a broad understanding of research design is needed. In particular, competence is needed in research methods that are appropriate in applied settings, but which may not be stressed in a typical graduate program: quasi-experimental, single-case, and non-experimental designs, along with psychometric methods.

Similarly, conductors of research need a general, broad competence in analysis in order to ensure that the method of analysis is congruent with the research design and the research question. For any sort of statistical analysis access to a good statistics computer program is needed. There are a multitude of programs available for personal computers, ranging from simple to complex and from cheap to expensive. Reviews of programs are one source for help in choosing a program, and appear occasionally in both professional journals and computer magazines. Beyond reviews, look for a program that computes the statistics wanted, is easy to use, is widely used, and is regularly revised.

One option is to use one of the major, comprehensive statistics packages (e.g., JMP, SAS, SPSS, SYSTAT). These programs are widely used and regularly updated, and errors in the programs will be quickly spotted and remedied. Unfortunately, these packages also tend to be the more expensive and largest programs available. Statistical programs are increasingly becoming required purchases in statistics classes, and are often available at a considerable discount through such classes; the opportunity to purchase a good program at a low cost may be an extra benefit for anyone planning to take a new or refresher research class. For example, as of this writing, the SPSS "Grad Pack" is available for approximately $170 through many university bookstores for registered students, whereas the same set of programs (although with additional documentation) can cost well over $1000 for non-students.

Other options are also available. There are numerous less well known, but comprehensive packages available (e.g., Number Cruncher Statistical Software, NCSS), or programs that add statistical routines to common spreadsheet programs (e.g., Analyse-it for Excel). Such programs tend to be less expensive than the major packages, and many even allow you to download a trial version from their websites. For those who need statistical software only occasionally, there are even web-based statistical packages (e.g., WebStat at the University of South Carolina). These are only examples; many other resources are available. Of course, if you use a specialized or less-common program, you will need to ensure that its results are accurate.

Conductors of research also need competence in communicating the findings of research orally and in writing. Nothing spoils a good piece of research faster than a report that is poorly written, vague, or full of jargon.

IMPROVING SKILLS: BECOMING A RESEARCH CONDUCTOR

Many psychologists have the knowledge necessary to conduct research, and most have, or could easily have, access to data that would be useful for research purposes. School psychologists are awash in data—test scores, ratings, observations—much of which would be ideal for research purposes with a little prior planning. What is generally missing is *practice* doing research; even school psychologists who have completed a thesis or dissertation often do not feel comfortable with the process of doing research. If this assessment is correct, then what psychologists need—those with the necessary requisite skills—is to work with, or even serve as apprentices to, others who actively are conducting research.

Probably the easiest way to develop a research apprenticeship is to contact faculty in school psychology or related areas at a local university. Most graduate faculty are expected to carry on a program of research as a part of their jobs; most would welcome help in data collection, analysis, writing, and the other tasks of research, especially so if you can provide a source of data and are interested in answering research questions that are of interest to them. Another option is to work with others at a local level who are doing research. For those interested in serving as an apprentice, proximity is important in order to experience all aspects of research. For those who already have research experience and who are looking for research collaboration, proximity may not be as important. With the use of attachments to e-mail, long distance collaboration is increasingly easy and common.

The best way to have the role of conductor included as a part of your job description is essentially the same as for a research distributor: volunteer to find the answer to a research question that evolves from a problem facing your school system (or mental health center, etc.). Helping to evaluate new or existing programs may also provide an entree into the role of a research conductor. If your research will answer a question of interest to your employer, not cost a lot of money, and not interfere with your other responsibilities, then you will probably be welcome to conduct it. It may take a commitment of your own time in the beginning, but if you can prove your worth as a research conductor, then your employer will begin to see this role as a part of your job.

SUMMARY

All school psychologists should be involved in research, but this does not mean that all should actually *conduct* research. All psychologists need to be effective *consumers* of research; that is, they should be able to critique research that has implications for their practice and incorporate the findings of that research into their practice. A smaller number of psychologists are needed to serve as research *distributors*: They summarize the findings of relevant research and convey those findings to their colleagues and employers. A still smaller number may be interested in actually *conducting* research: They should be able to design and conduct studies that answer research questions of interest to themselves and their employers. It is not particularly difficult to serve in any of these roles, and advances in computers, software, and the Internet have made these research roles available to a much wider audience. As with any new role, the hardest part is getting started.

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This book is full of excellent advice on how to conduct thesis and dissertation research. It is equally applicable for school psychologists who wish to become research conductors.

Huck, S. W., & Cormier, W. H. (1996). *Reading statistics and research* (2nd ed.). New York: Harper Collins.
This fine book is intended primarily for those who want to read and understand the research of others (here called research conductors and distributors). The book also presents useful examples for writing the results of research. It presents statistics and research design from a conceptual standpoint and does a nice job of demystifying research. The first edition included a helpful introduction to single-case designs, which is missing in this second edition.

Kazdin, A. E. (1982). *Single case research designs.* New York: Oxford University Press.
This is one of several excellent books that can serve as both an introduction and a reference text for single-case research methods.

Keith, T. Z. (1988). Research methods in school psychology: An overview. *School Psychology Review, 17,* 508–526.
This article provides a conceptual overview of diverse research methods used in school psychology, with a particular emphasis on understanding the power of different methods for inferring that a research treatment produces an outcome.

Kerlinger, F. N. (1986). *Foundations of behavioral research* (3rd ed.). New York: Holt, Rinehart & Winston.
This is my single favorite book on research. Kerlinger's is primarily a conceptual, theoretical approach, although he does not shy away from numbers. Although there is some unevenness of coverage (single-case designs are not

discussed; the presentation of LISREL is overly enthusiastic), and the book is becoming dated, this is still a very thorough book.

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Phillips presents a variety of issues pertinent to research in school psychology, written primarily for consumers and distributors.

7

Best Practices in Supervision of School Psychological Services

S. A. Hunley
University of Dayton
M. J. Curtis
University of South Florida
G. Batsche
University of South Florida

OVERVIEW

Growth in the number of school psychologists nationwide reflects recognition by the school communities that school psychologists make valuable contributions to the mental health and education of children and youth. More schools than ever before are asking for help in dealing with everyday academic and behavioral problems. School psychologists are entering the field with a higher level of training than in the past (Hunley, 1998) and are prepared to handle a wide range of professional requests.

School psychologists provide direct services to students and families, work as members of school-based problem-solving teams, and provide indirect (e.g., consultative) services to teachers, school buildings, and school districts. The school reform movement that began in the 1980s and continues today has resulted in a significant increase in site-based management, participatory governance (e.g., school improvement teams), accountability based on student outcomes, and a general decentralization of services to the school level. As a result, school psychologists in leadership roles find themselves in the position both of supervising professionals from other disciplines (e.g., social workers/counselors) and being supervised by professionals from other disciplines (e.g., building principals) as well as supervising (and being supervised by) other school psychologists. This increase in demand for services, the ability of school psychologists to offer a variety of services across different settings, and the changing organizational/accountability structure of schools, has changed significantly the focus and nature of supervision. Therefore, there arises a need for school psychologists to consider supervision within a broader framework, one that recognizes the reality of practice in a setting in which the organizational structure, demand for program accountability, and focus on outcomes no longer permits a process that is limited solely to clinical supervision by professional peers. In this framework, it is imperative that a new paradigm of supervision in school psychology must be considered.

BASIC CONSIDERATIONS

Research in Supervision

Literature on the subject of supervision of school psychological services has been very limited. The predominant emphasis in published articles has been on direct, clinical supervision of school psychologists for the purposes of professional accountability and development. In their review of the literature, McIntosh and Phelps (2000) identified five major areas of concentration in clinical supervision research. These areas included (a) clinical supervision practices within the field, (b) the congruence of supervision practices with professional standards, (c) the role of supervision within school psychology training programs, (d) the provision of effective supervision, and (e) the evaluation of models of supervision. Further analysis of the studies in the research by McIntosh and Phelps (2000) lead them to the conclusion that very few were data based and none attempted to demonstrate that supervision led to more effective school psychologists or to more positive client outcomes. The authors call for further research to better understand the efficacy and appropriateness of direct supervision of school psychologists.

The focus in the literature on direct, clinical supervision is understandable given a traditional definition of supervision as a function for ensuring and supporting the accountability and professional growth and development of school psychologist supervisees. However, supervisors are no longer able to limit their responsibilities to that of direct supervision of supervisees for the reasons cited earlier in this chapter. Supervision in school psychology occurs at multiple levels (individual, site/building, and system), by multiple individuals (peers, administrators, unit supervisors), and for multiple reasons (clinical skills, program accountability, student outcomes). Therefore, the basic considerations fundamental to constructing a comprehensive model of supervision must take into account the actual and desired skills of the school psychologist, the expectations of the settings in which the school psychologist provides services (e.g., building or district), and the administrative structures of each of the settings (e.g., principal at school level, supervisor of psychological services at district level).

A comprehensive model of supervision of school psychological services does not suggest the elimination of direct supervision; rather, it expands the concept of supervision to include the roles of non-school psychologists in the process. The comprehensive approach acknowledges that school psychologist practitioners are looking for leadership from a school psychologist who understands their professional practice issues and who can advocate for them at all levels of the system, both directly and indirectly. In addition, the comprehensive approach recognizes that school psychologists will be supervised by other professionals as well. A comprehensive approach provides the leadership to ensure that supervision provided both by school psychologists and other professionals is appropriate for both the tasks and the settings in which the supervision is provided and is fair and equitable to the service provider. As the twenty-first century unfolds, supervisors of school psychologists will be expected to fulfill a much broader role as leaders in the mental health and educational environment of schools.

Supervisors (school psychologists and non-school psychologists) of school psychologists are referred to infrequently in terms of leadership roles. This is incongruent with the fact that they are in an advantageous position to influence the field in its endeavor to provide the best mental health and related educational practices for children and youth in our schools. The time is right for school psychologists to assume a proactive stance in advocating for best services for children and youth in schools and a comprehensive model of supervision and evaluation that supports those best practices. Major reform initiatives, fundamental policy and practice changes, and advancements in technology have opened many doors for change. It has been suggested that major institutional changes within our schools and related mental health organizations reflect the trend toward comprehensive, integrated service delivery (Adelman, 1993). It is logical, therefore, that models of supervision reflect a comprehensive, integrated approach to match the service delivery systems. Supervisors of school psychologists are strategically positioned in schools to be the logical professionals to lead these changes.

Leadership requires active participation in change efforts at the individual, building, and systems levels. The professional functions of the school psychologist practitioner are expanding beyond a narrow emphasis on assessment to include membership on problem-solving teams, the provision of research-based interventions, and crisis prevention and stabilization in the schools. With more responsibility comes a greater need for programmatic planning, organization, and supervision. School psychologist practitioners look to their supervisors for guidance and leadership that will enable them to provide effective services to students in schools. The practitioner will depend more and more on competent supervisors to ensure that school psychological services are relevant and recognized as effective by the consumers of those services.

The school and community members are also searching for support, guidance, and leadership that will ensure that their students and children are properly educated and that our schools provide safe, secure, and healthy environments. School psychologists are charged with improving the mental health and educational success of students. It makes sense then, that supervisors of school psychological services should provide the guidance and leadership necessary to connect students, schools, and community members with the support services that they need.

BEST PRACTICES: A COMPREHENSIVE MODEL OF SUPERVISION IN SCHOOL PSYCHOLOGY—A NEW PARADIGM

Goals of Supervision

Supervisors of school psychological services demonstrate leadership by emphasizing the development and maintenance of a service unit that provides positive, measurable mental health and educational outcomes for children and youth (National Association of School Psychologists, 2000). In addition to the leadership goal, two other primary goals of supervisors of school psychological services have been identified (Harvey & Struzziero, 2000). Supervisors work toward improving the professional functioning of supervised school psychologists. They are also charged with protection of clients the school psychologists serve. In combination, these goals suggest that the supervisor could be viewed as a link between the school psychologists as service providers and the clients they serve.

In this linking role, the supervisor must be responsive to client needs. In the case of school psychological service units that are situated in schools, the clients are defined as those people who may be affected by the services provided by the unit. Those clients include students, teachers and school personnel, administrators, parents, and the community. It is the responsibility of supervisor(s) to provide leadership in the development of a unit that provides mental health and educational support services that are driven by client needs.

Goals for Service Delivery

Service delivery decisions for the school psychological services unit are driven by characteristics of the school district, the mission of the settings in the district within which the school psychologist provides services (e.g., school improvement plan), predetermined job parameters (e.g., assessment for special education, crisis team participation), and accountability or educational outcomes. School districts vary in size, population served, geographic location, and a multitude of other ways that may affect the manner in which school psychological services are delivered. For example, in a large urban district with a high rate of poverty and violence, there may be a great need for strong crisis management services. The school psychological services unit within the district may be large, and organized to include a crisis team that can be mobilized on short notice. On the other hand, a rural district that has a relatively small number of students in a large geographical area may not have the resources within the school psychology unit to provide the same level of crisis management services. In the latter case, the unit may need to include other educators, community resources, and agencies as part of the crisis management team. The supervisor must understand the demographic characteristics of the school district in order to facilitate the development of a service delivery system that not only meets client needs but makes optimum use of the available resources.

School psychological services delivery may be well defined in school districts through clearly articulated mission statements and job descriptions. However, mission statements and job descriptions that are developed at the district level without consideration of the needs of individual school buildings and communities may be incomplete or inappropriate. It is the responsibility of all the supervisors within the unit to be involved in the development of both the district mission statement and the relevant job descriptions and expectations for school psychologists at the practice site levels (e.g., school building or district program).

Two goals are inherent in the development of mission statements and job descriptions from the perspective of school psychological services. First, information must be gathered to determine client needs. Clients needs might vary considerably across the multiple settings in which a particular school psychologist provides services. Second, input regarding the capacity and types of services that can be delivered by the unit are offered. With information from both perspectives an appropriate mission statement and relevant job descriptions can be produced.

A related, but important area of concern with regard to the development of school psychological services is included in the general topic of educational outcomes. For school psychologists and intervention teams, this means the documentation of measurable positive outcomes in the mental health and/or the educational status of the students they serve. More specifically, the focus is on the degree to which intervention services result in a significant improvement in academic performance and/or social behavior in the school setting. Frequently, school psychologists, who are focusing on long-term changes for individual students, may seem to be in conflict with the school district's need to demonstrate overall positive academic gains for the majority of the students, and the teacher's and parent's need to see quick improvement. The supervisors of individuals providing school psychological services should serve to facilitate understanding from all perspectives and promote collaborative efforts to resolve the differences. This can be accomplished in a number of ways. First, school psychologists can provide information to supervisors and consumers that explains the relationship between the intervention and the desired outcomes. Second, school psychologists can provide student-based outcome data that demonstrate that the student is making progress toward the desired goal. It is the responsibility of the school psychologist to provide these links and data. Failure to do so results in a situation in which the supervisor is making judgments about the value of services based on the perception of those services. Decisions are made based on the expectation that the school psychological services unit will demonstrate that services are efficient and effective and that the providers of such services will be held accountable for the results.

Roles and Skills of the Supervisor

The supervisors of school psychological services conduct business through two related approaches. The problem-solving approach is a reactive technique for responding to problem situations that already exist. In contrast, the decision-making approach is a proactive stance that is taken when planning for change. Both approaches require information gathering and the generation of strategies. Reliability and validity of problem solving and decision making are optimal when data are used for defining, planning, monitoring, and accounting for the results generated from each of these strategies. Problem-solving and decision-making skills guide the effective and efficient provision of services. Supervisors use these skills to conduct daily business in all of their professional roles.

Harvey and Struzziero (2000) suggest that there are three basic roles in which supervisors engage. They are interpersonal roles, informational roles, and decisional roles. Interpersonal roles require strong communication skills for organizing, managing, and leading in the delivery of school psychological services to clients. Effective interpersonal communication skills lead to increased productivity and positive outcomes.

The second role of gathering and generating information is most beneficial when it is data based and leads to effective solutions or desirable plans. Information is gathered from the clients and other sources in order to inform the school psychological service unit regarding the determination and prioritization of job tasks. The unit also generates information in order to provide accountability data to clients.

Decisional roles are often administrative in nature and are frequently rooted in accountability issues. Decisional roles include reactive problem-solving as well as proactive decision-making skills. Effective and efficient supervisors generally spend more time in a proactive mode versus a reactive mode. The proactive mode allows the supervisor to predict and minimize potential problems before they become major issues. In effect, the supervisor takes the perspective of a change agent instead of a crisis manager.

Knowledge and skill in a variety of areas is essential for competency in supervision of school psychological services. The National Association of School Psychologists' Supervision, Evaluation, and Accountability Committee (National Association of School Psychologists' Supervision Work Group, 1998) has generated a list of these competencies. They identified a number of areas needed for proficient interpersonal facilitation by supervisors such as competence in consultation, collaboration, and systems change. There also must be a sound understanding of and commitment to ethics, best practices in the delivery of services, professional standards, continuing professional development, the application of accountability methods, models of service provision that are responsive to client needs, sources of funding, and legal and regulatory issues in order to effectively and efficiently solve problems and make decisions. Administrative demands can be streamlined through the use of technology and through the implementation of management and business practices. This requires that supervisors remain abreast of new leadership principles, administrative technologies and advancements in the areas of time management, communication, data management, budgeting, and grant writing.

Comprehensive Model of Supervision

This chapter offers a model for the supervision of school psychological services that emphasizes the role of the supervisor as a leader and a linker. The Comprehensive Model of Supervision is composed of the types of supervision (clinical and administrative) that occur at three different levels (individual, building/program, district/agency). This model expands the focus of supervision from the individual, clinical supervision to one that includes individual and systems-level perspective. The model recognizes further the pragmatic perspective that school psychologists will be supervised by individuals trained in other disciplines and that school psychologists will also supervise individuals from other disciplines.

Re-Defining the Types and Levels of Supervision in School Psychology

TYPES OF SUPERVISION

There are two types of supervision that are relevant to the profession of school psychology today: clinical and administrative. The traditional perspective of supervision in school psychology has remained focused over the years on the process of clinical supervision. *Clinical supervision* is the practice of one professional (presumably with more experience or greater skill level) providing guidance and feedback to another professional *within the same profession.* A great deal has been written on the process of clinical supervision across the mental health professions. Best practices have been developed to facilitate the ongoing professional growth of individuals within a given profession.

The primary purpose of clinical supervision is to ensure that individuals practicing in a profession provide consumers with the quality services expected from professionals who hold a particular credential. The process of clinical supervision is important enough that most professional associations have promulgated standards that define the professional requirements necessary to perform the role of a supervisor and indicators of quality supervision (e.g., number of supervision hours required to obtain a credential). Clinical supervision is generally provided one-to-one or in small groups and focuses on the maintenance and development of the skills that define that profession (e.g., problem solving, consultation, communication). The role of the supervisor is to recognize the need, to support school psychologist practitioner efforts to participate in training opportunities, and to ensure that direct clinical supervision is provided as an avenue for professional development. The extent of direct clinical supervision varies according to the needs of the individual school psychologist. Novice or struggling practitioners require more intensive individual supervision by the supervisor, while more experienced and effective practitioners may benefit from group supervision or peer mentoring. In all cases, the supervisor is responsible for ensuring that appropriate clinical supervision is provided.

A number of methods or approaches have been identified for use in clinical supervision with school psychologists (Harvey & Struzziero, 2000). Among them are the consultation approach, the psychodynamic orientation, the client centered approach, the behavioral approach, the cognitive behavioral approach, and the systems approach. The development of competencies may require the provision of alternative professional development opportunities as well. For example, school psychologists may benefit from external training programs offered by universities, national and state professional organizations, and other agencies. Each method has as its primary goal the improvement and maintenance of individual practitioner skills.

The consultation approach is based on collaborative problem solving relationship between the supervisor and supervisee. In contrast, the psychodynamic orientation focuses on fostering a therapeutic relationship and mirrors the interactive relationship between the supervisee and the client. The client-centered approach emphasizes the development of skills through the direct analysis of content and process of supervisee-client sessions. The behavioral approach promotes the growth of supervisee skills through goal setting, provision of feedback, and monitoring of supervisee behavior. The emphasis in the cognitive behavioral orientation is on changing observable behaviors of the supervisee by modifying cognitions, affect, and actions. No one approach fits all supervisees, and the supervisor must choose the model(s) most appropriate based on the level of competence that is expected to be most effective in addressing the specific needs of that individual.

Administrative supervision in school psychology focuses primarily on processes that relate to how well a unit (e.g., psychology services unit) or building (e.g., particular school) performs. Administrative supervision is focused on outcomes (were goals achieved), group dynamics (did the team perform well as a unit), logistics (were goals completed on time, was follow-up provided), and consumer satisfaction (did teachers/parents/administrators perceive the services in a positive way). There is little or no focus on the professional behaviors associated with the discipline-specific clinical skills (e.g., assessment/consultation) necessary to achieve the desired outcomes. In fact, individuals providing administrative supervision may not have the qualifications necessary to engage in discipline-specific clinical supervision *and may be trained as professionals in another discipline.* An appropriate analogy would be a hospital administrator who is responsible for the administrative oversight of physicians in the hospital but is not a physician and therefore cannot provide clinical supervision to the staff.

Administrative supervision goals may clash with clinical supervision goals. It is not unusual for administrative supervision goals to focus on "efficient" services while clinical supervision goals focus on "quality" services. Efficient services are those that maximize productivity, minimizing the investment of resources. The provision of efficient services can be a point of contention between supervisors and school psychologists for whom they are responsible in school districts that maintain a high priority on productivity. For example, school psychologists may be valued by administrators according to the number of evaluations they complete. On the other hand, the school psychologists may place a higher value on the number and quality of intervention-based services that are completed. The supervisor, in such a district, must link the school district administration with the school psychologists through active, open communication. The perceptions, goals, obstacles, and outcomes generated from each group must be clearly and objectively shared with the other group in order for them to agree to an acceptable definition of efficient services. Once an agreeable definition of efficiency is determined, it is the responsibility of the supervisor to obtain outcome data from each school psychologist. These outcome data are the basis for determination of success in achieving the identified standard, for both the individual school psychologist and the unit. The supervisor then makes decisions accordingly, having the ultimate responsibility for ensuring that services are maximized and costs are minimized.

Effectiveness in the delivery of school psychological services can be more difficult to measure than efficiency. Therefore, a clear definition of effectiveness must be established and agreed upon. Effectiveness includes two basic elements: quality and positive client outcomes. The "quality" of school psychological services is an intangible, subjective concept that can be defined further by identifying measurable outcomes that tend to be process oriented. Quality in this sense might be indicated by less paperwork, less processing time, happier funding sources, general client satisfaction, lower costs, and a positive public image.

Positive client outcomes, the second element of effectiveness, might be demonstrated through the collection of data either from individual cases that focus on intervention-based services or from group or system level benefits for clients. For example, data could be used to demonstrate positive changes in individual student behavior or academic performance following intervention. On the other hand, data might also be used to demonstrate positive changes at the classroom, school, or even district level as a result of school psychological services. The supervisor works with the school psychologists to determine the amount and type of data that will demonstrate the effectiveness of services delivered by individuals, as well as by the unit, and then facilitates data collection. In addition, the supervisor presents the data to the appropriate audiences in order to demonstrate the level of effectiveness and efficiency of the unit.

Clinical and administrative supervision are integral to the development of school psychological services that are responsive to the needs of clients, and are based upon best practices in the provision of school psychological services. In the Comprehensive

Model of Supervision, both types of supervision are included at the individual level. However, clinical supervision is primarily directed inwardly, toward the school psychologist within the unit, as a method for professional development. Conversely, administrative supervision is directed toward external audiences, and serves to promote the success of the unit.

LEVELS OF SUPERVISION

Supervision in school psychology occurs primarily at three levels: individual, building, and unit. Clinical and administrative supervision can occur at all three levels. Figure 1 represents, at a functional level, the possible supervision scenarios considering both type and level of supervision. The school reform movement of the late 1980s resulted in significant changes in the organization and operations of schools. Three major changes that affected supervision of school psychologists were decentralization, participatory governance, and outcome-based evaluation methods. An effective building principal was viewed as the essential ingredient necessary in a successful school. Building principals were given broad authority for staff selection, staff evaluation, and budget administration. Professionals assigned to individual school buildings now had part or all of their supervision and evaluation provided by educational administrators. The organization of individual school buildings was built around committees (e.g., school improvement committee) composed of practitioners (teachers, counselors, school psychologists). These committees were given the charge of "reforming" the school climate, recommending curricular change, and providing leadership for the professional development of the staff in the building based on the perceived needs of the students and families. The implementation of outcome-based evaluation methods has resulted in the "grading" of buildings, public announcement of achievement profiles for buildings, and the expectation that all services in a building contribute, in a meaningful way, to the building "outcome."

As a result of the changes that have occurred in the past 15 years, school psychologists find themselves accountable to different levels of supervision. These include supervision provided by a colleague or mentor, supervision provided by the educational administrator in a building or program, and supervision provided by the administrator of the psychological services unit (who may or may not be a school psychologist). Because supervision does (and will continue to) occur at different levels, it is important to identify the *types* of supervision that are appropriate for each level and the *types* of activities that are appropriate for supervision at each level. It is essential that the types of supervision be matched to the activities to be supervised at each level. Failure to do this will result in a school psychologist receiving supervision (and evaluation) by a person who is not qualified to engage in that supervision and evaluation. Although we all might like to limit the types of supervision we receive to clinical supervision by qualified practitioners in our own discipline, reality would indicate that school psychologists will receive more supervision by non-school psychologists in the future.

Supervision and Evaluation

The process of supervision is linked to the process of evaluation. Arguably, it is the process of evaluation that has the most negative connotation for school psychologists. More specifically, school psychologists are most concerned about evaluation when the impact is financial or involves job security. School

FIGURE 1. Example of professional activities as a function of level and type of supervision

TYPES		Levels of Supervision		
		Individual	Building	Unit
	Clinical	Counseling skills	Social skills program	Supervision of supervisors
	Administrative	Paperwork	Team-based issues	Outcomes

psychologists are more likely to embrace supervision and evaluation when evaluation is formative and primarily serves to inform the process of supervision to enhance skills or outcomes. However, when the supervision-evaluation process affects salary or job placement, then concerns arise and efforts are initiated to put limits on supervision/evaluation.

The school reform movement increased the level of accountability expected of all professionals working in the public schools. School psychologists are no exception. Increasingly, administrative supervision has included the expectation that school psychologists (or student services teams) will be able to demonstrate the degree to which the services and interventions they provide are effective and have positive impact at the individual, classroom, or building level. School psychologists should be aware of methods of program evaluation that will enable them to demonstrate program effectiveness. At the same time, supervisors must provide the leadership necessary for staff to acquire and implement program evaluation skills. Program evaluation serves four basic functions. First, it provides the opportunity to demonstrate the effectiveness of a particular program or intervention. Second, program evaluation serves to inform program modification, when necessary. Third, program evaluation serves to identify the professional development needs of staff. Finally, program evaluation data serve to promote program development and funding for expansion of staff. However, program evaluation must be fair and equitable to all involved. The process of supervision is complex. Poorly organized evaluation processes will serve only to render supervision functionally useless.

What, then, can be done to ensure that the supervision-evaluation process is fair and equitable? The following guidelines are suggested to ensure fairness and equity:

1. Define the types of supervision and levels of supervision that will be provided to school psychologists.

2. Identify the specific content and activities that will be the subject of the different levels and types of supervision.

3. Develop evaluation measures that are mutually agreed upon both by the supervisor and the school psychologist *for each of the levels and types.*

4. Communicate, prior to the implementation of the supervision and evaluation plan, the proposed use of the evaluation information.

Comprehensive Model of Supervision: An Example

Figure 1 provides examples of professional activities that would be subject either to clinical or administrative supervision at the individual, building, or unit levels. It is possible that each of the "cells" in the figure could be composed of discrete activities (as in Figure 1) or the cells could be composed of different parts of a single activity. As an example, we will examine how the different types of supervision and different levels of supervision might be applied to a case involving the implementation of a building-wide program to reduce bully behavior. In this example, we will assume that there are a number of students who are actively bullying and the building principal wants a program both to address the individual students and prevent building-wide problems in the future. Assume that the program will involve small group work with a number of bullies (e.g., anger control training), the implementation of a building-wide social skills training program, training teachers to implement classroom social skills training, and the implementation of a data tracking system for program evaluation. This is an example in which all levels and types of supervision will be active.

1. *Clinical-individual:* The school psychologist might choose to seek collegial supervision for the implementation of an anger control training group.

2. *Administrative-individual:* The school psychologist will receive supervision from the building principal in order to receive approval for the anger control training group, to coordinate discipline procedures for these students, and to agree on "indicators of success" for these students.

3. *Clinical-building:* The school psychologist might choose to seek supervision from colleagues or the supervisor of psychological services on the development and implementation of the programmatic aspects of the classroom-based social skills program.

4. *Administrative-building:* The school psychologist would receive supervision from the principal or

teacher supervisors on the logistics (communication, scheduling, expectations) of the implementation of the classroom-based social skills training program.

5. *Clinical-unit:* The school psychologist would receive supervision from the supervisor of psychological services on the development of a "training the trainer" model for implementation of this program in other parts of the district or might receive supervision regarding how to supervise the teachers in the building who are implementing the program.

6. *Administrative-unit:* The school psychologist would receive supervision from the building principal regarding the outcomes of the program in the building and in modifying the program based on those outcomes.

School psychologists work in multiple settings each week. It is unrealistic to assume that a single model of supervision could apply to those settings. It is also unrealistic to assume that a single set of qualifications for a supervisor (e.g., same discipline, more experience) are sufficient to provide quality, effective supervision across those settings. The important factor here is to ensure that the *appropriate* type of supervision is available for the *appropriate* setting and activity. It is the outcome of supervision that is important, not who provides that supervision. If the process of supervision results in improved skills, facilitated program implementation, and demonstrated outcomes of services, then the supervision is appropriate and effective. It is the responsibility of the school psychologist, building and district administrators, and district superintendents to recognize that (a) different types of supervision are appropriate and (b) appropriate supervision is available. It is important that school districts and agencies use a rubric such as the one in Figure 1 to define activities that are appropriate for each of the types and levels of supervision, to agree on the content of the rubric, and to communicate and implement the rubric consistently.

By using the rubric in Figure 1, a model of evaluation can be applied to the supervision structure. The content of the evaluation in Figure 2 is taken from the "bully" example from the previous section.

Supervision at the Systems Level

In large school districts or agencies, supervision of psychological services may be consolidated at the systems or centralized level. In a recent survey of supervisors of school psychologists (Hunley et al., 2000) respondents indicated that program maintenance was frequently a major part of their daily responsibilities. Respondents reported that program maintenance typically included program administration and personnel issues. Program development was also reported to be a common responsibility for supervisors. Other job responsibilities that were reported to occur "sometimes" included program evaluation, linkage within and between agencies, conflict resolution, and developing and managing budgets. Finally, the results of the

Figure 2. Evaluation methods/outcomes by types and levels of supervision

		Levels of Supervision		
		Individual	Building	Unit
TYPES	Clinical	• Observation • Student participation	• Review of program • Teacher preparation • Teacher satisfaction	• Review of program • Trainer participation • Numbers trained by trainer
	Administrative	• Student behavior problems	• Principal observations • Principal review of program • Teacher satisfaction	• Discipline problems • Implementation issues • Program modification

study revealed that supervisors "infrequently" engaged in research, personnel grievances, and grant writing. The results of this study support the concept that supervisors spend at least some of their time in professional activities at the systems level.

In the Comprehensive Model of Supervision, there are two primary roles and responsibilities that are undertaken by the supervisor at the systems level. The supervisor is responsible for program maintenance and program planning and organizing. Program maintenance refers to the day-to-day management of school psychological service delivery in terms of personnel, resources, and accountability. Program planning and organizing has a proactive orientation, which emphasizes goal setting, growth, and development.

PROGRAM MAINTENANCE

One basic program maintenance responsibility of supervisors is to manage resources effectively and efficiently with the goal of creating a positive physical environment. Budgeting, data management, and communication technology are important in the promotion of high quality psychological services for children and youth in the schools. The supervisor secures proper office space, equipment, supplies, and personnel in order to reduce wasted time and effort expended by the school psychologist practitioners that could be spent in direct, indirect, or prevention services for children.

Program evaluation and goal attainment monitoring represent another aspect of program maintenance that is critical to the successful delivery of services. This is accomplished through cumulative data gathering that is generated in the process of individual administrative supervision. In addition to the individual evaluation and monitoring of professional skills, the supervisor must consider the efficiency and effectiveness of the unit as a whole. Furthermore, the supervisor is responsible for ensuring that services are delivered according to legal, ethical, and best practice standards. The supervisor acts as a liaison to the school and community in order to enable the school psychological service unit to be responsive to client needs and to provide program evaluation and goal attainment accountability information.

Supervisors of school psychological services spend some daily management time and effort in direct support of their supervisees. They work to motivate practitioners to perform well, and they manage conflict that might impede service delivery. School psychologists are motivated and encouraged by the supervisor who provides emotional support, encourages stress management techniques, and offers rewards for jobs well done. Conflict management occurs through team building, networking, delegating, and specific conflict resolution strategies.

PROGRAM PLANNING AND ORGANIZING

The supervisor of school psychological services actively engages in program and staff growth and development. Proactive programmatic planning and organizing, and staff development begin with shared goal setting, decision making, and problem solving. Effective leaders work diligently to promote the growth and development of effective programs that can be delivered by the school psychological services unit.

Staff development is encouraged through effective hiring and placement decisions, and through ongoing professional development activities. The supervisor is responsible for advocating for funding through the local district as well as for identifying and securing funding from external sources to support sufficient staff to meet the needs of the school district. The recommended ratio of school psychologists to students is 1:1000 (National Association of School Psychologists, 2000). Hiring and placement decisions often are made by a committee; however, the supervisor provides information to the committee to ensure that decisions are appropriate and that there is a good match between the expectations of the applicant, the needs of the school district, and the school psychological services unit. The supervisor is frequently responsible for determining the work setting and job responsibilities for each of the school psychologists. Such decisions must be made based upon the professional and interpersonal skills and interests of the practitioner, as well as the specific requirements of the placement setting. For example, it is generally most beneficial to maintain the school psychologist in a setting over a number of years in order to promote the development of an understanding by that individual of the setting as a system and an effective working relationship as a member of that system.

The supervisor further encourages staff development by offering a variety of ongoing professional development opportunities. In addition to providing direct individual clinical and administrative supervision, the supervisor supports other professional development opportunities that are necessary to achieve the professional goals established by the individual practitioners and by the unit as a whole. As much as possible, the supervisor secures financial support, professional leave, and information about such professional growth opportunities.

Program development occurs when the supervisor facilitates collaborative efforts within the unit and between the unit and other relevant groups. For example, the unit may work toward the implementation of a new program for substance abuse prevention by collaborating with various groups within the school district, state or national organizations that fund grants, and community agencies. In this scenario, the supervisor may serve as the interagency linker, a grant writer, and program implementer.

Leadership

In general, supervisors who adopt the Comprehensive Model of Supervision use the Human Resources approach (Sergiovanni & Starratt, 1998) for supervision. Harvey and Struzziero (2000) recommend this approach and describe supervisors as "key members of the leadership team. They link top administration to supervisees but also link supervisees to top administration, taking an integrative rather than a buffering role" (p. 46). Top administration, while clearly important, represents only one element of the client system. All groups in the client system must be represented, as supervisors work to link them with the school psychological services unit.

The role of the supervisor at the systems level is to demonstrate effective leadership, which unites the school psychological services providers with the clients they serve in pursuit of common goals. This is accomplished by building strong interpersonal relationships (Havelock, 1973), identifying common goals (Harvey & Struzziero, 2000), developing and implementing action plans that are acceptable to all relevant parties, sharing outcome data, and communicating among and between the parties on a regular basis. Goldberg (as cited in Harvey & Struzziero, 2000) suggested that "Leaders do not dominate others, but encourage others to adopt group goals as their own. They also build highly functional teams to achieve these goals. Effective educational leaders are characterized by vision, tenacity, self evaluation and improvement, time commitment, and career dedication" (p. 48).

Three major aspects of the leadership process have been offered by Chemers (1993) in his integrative theory of leadership. Leaders operate by image management, relationship management, and resource utilization. He defines image management as those aspects that affect the perception of the leaders by others. Relationship development encompasses the leader's efforts to establish an exchange that motivates followers' efforts and guides those efforts in productive directions. Resource utilization concerns the ability of the leader to make the most effective use of his or her own energies and the talents, efforts, and resources of subordinates in the accomplishment of organizational objectives.

Although Chemers' (1993) underlying position regarding the three major aspects of leadership has merit for supervisors of school psychological units, it suffers from the traditional view that supervision is directed inward, toward the unit, with little recognition that the same principles apply to the clients in the system that are external to the unit. The Comprehensive Model of Supervision would support a broader perspective in that images, relationships, and resources are managed with the understanding that service providers and clients in the system have an investment in the outcomes of psychological services provision.

Future Directions

Supervisors are in an excellent position to provide leadership for the entire field in the advancement of school psychological services in schools. They can encourage positive changes in the field, and minimize trends that could adversely affect the delivery of school psychological services to children in schools. In the survey by Hunley et al. (2000), supervisors clearly identified two primary needs. First, the study revealed that school psychologists lacked a clear identity as supervisors. The vast majority indicated that they were identified through a variety of different job titles and many reported feeling isolated from others in similar positions. Second, they reported having had little or no training in the supervision of school psychological services, and, as a result, many expressed interest in professional development opportunities that are specific to school psychology supervision.

In response to these issues, an advanced recognition system for supervisors of school psychologists has been proposed for consideration by the National Association of School Psychologists. This system would not represent a required credential for practice but, rather, a means for recognition to identify, to the school psychology profession and to the public, those school psychologists who have met national supervision standards. It would also promote professional identity, increase visibility, and improve accountability for supervisors. Finally, an advanced recognition system encourages the professional growth of supervisors.

SUMMARY

Supervisors of school psychological services are in an advantageous position to provide leadership to the field in the provision of mental health and related educational services for children in the schools. In this chapter, past trends, a new model, and future directions of supervision of school psychological services were discussed. Leadership was emphasized as an effective means for promoting best practices and specific competencies were identified. The chapter reviewed direct and indirect approaches to supervision and recommended a Comprehensive Model of Supervision that incorporates both approaches. Supervision of the individual practitioner and the use of a systems approach provide linkage between the school psychological services unit and the school and community were highlighted. Recognition of the impact that supervisors have on services delivered to children in schools is essential to the field of school psychology. Such a stance requires the support of professional organizations and the educational community.

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This text presents an overview of theories, models, skills, and practices in the supervision of school psychologists. It offers case studies, exercises, and strategies for supervisors of school psychologists and for students enrolled in a supervision course.

8 Best Practices in Supervision of School Psychology Staff

Randy Allison
Heartland Area Education Agency 11

OVERVIEW

Supervision of school psychology staff, regardless of the model, is a complex, demanding, and multifaceted task (Conoley & Bahns, 1995; Harvey & Struzziero, 2000). To consider supervision as anything less would be a significant misunderstanding of the supervision role and its potential to affect the quality of services provided by school psychologists. Just as the role of school psychology has evolved, so has the need to consider the role of supervision as evolving. As the demands increase on the practice of school psychology, so do the demands on individuals who provide supervision to assure those individuals who practice are truly developing the required competencies. But supervision needs to be viewed as more than just developing competencies. Supervision should be seen as the responsibility to provide leadership.

Historically, supervision is described in terms of methodologies, the intent of supervisory action, and the professional development of interns. Though the literature on supervisory practices in school psychology is not abundant, there are several sources that address the critical aspects of supervision, as it has been traditionally defined (Knoff, 1986; Zins, Murphy, & Wess, 1989; Conoley & Bahns, 1995; McIntosh and Phelps, 2000; Harvey & Struzziero, 2000). Most recently, McIntosh and Phelps (2000) defined supervision as an interpersonal interaction between two or more individuals for the purpose of sharing knowledge, assessing professional competencies, and providing objective feedback with the ultimate goals of developing new competencies, facilitating effective delivery of psychological services, and maintaining professional competencies. Harvey and Struzziero (2000) described supervision of school psychologists as having the four goals of providing leadership, enhancing the functioning of the supervisees, fostering self-supervision, and protecting clients served by school psychologists.

BASIC CONSIDERATIONS

The purpose of this chapter is to describe pragmatically the considerations and activities required for supervising school psychology staff when an organization is changing its practice to a problem-solving, needs-based, orientation from a traditional, categorical, orientation. The opinions and positions in this chapter could be used with any of the other styles or methodologies of supervision described elsewhere in the literature.

The considerations and activities described in this chapter are derived from the professional literature and a retrospective compilation of supervisory methods employed during the 1990s at Heartland Area Education Agency 11 in Johnston, Iowa. More than 60 school psychologists are employed to serve the 56 school districts that comprise this intermediate service unit. A problem-solving model of addressing student needs has been used in Heartland beginning in 1990. The process of transitioning from a traditional test oriented, categorically focused model to a new system of service delivery provided the impetus for the supervisory strategies that are discussed in the remainder of this chapter.

BEST PRACTICES IN SUPERVISION OF SCHOOL PSYCHOLOGY STAFF DURING CHANGE: SUPERVISORY CONSIDERATIONS FOR INSTITUTIONAL CHANGE

Supervision is a complex, multifaceted task. As such, it is important to identify the critical features requiring attention. Keys to successful supervision for institutional change are presented below. Each of these keys will be addressed in more detail to further illustrate the concept.

Keys to Supervision Through Times of Change

1. Knowledge and skills in leadership
2. Understanding and appreciation of the change process
3. Vision of the future and the subsequent needs of staff
4. Knowledge and skills in the innovation area(s) being changed
5. Skills in evaluation and monitoring
6. Understanding of the impact of educational change
7. Recruitment and maintenance of staff
8. Alignment of critical elements within the system

KNOWLEDGE AND SKILLS IN LEADERSHIP

Professional supervision requires knowledge of leadership and the practice of leadership skills. Tally (1990) notes that leadership is the key to advancing a profession with professional advancement being operationalized as putting into reality the theories and concepts of the continuously changing professional field. Barker (1992) suggests that leaders are people you would follow to a place you would not go by yourself. Covey (1990) proposes that leaders define the direction of the organization rather than simply managing the operations of the organization. According to Patterson (1993), managing is critical to the success of an organization and is performed at all levels within the organization. Managing is a necessary part of what leaders must do. But, managing is not the same as leading (Patterson, 1993). A leader is one who others look to for answers, come to for advice, or seek for support in difficult situations. Strong supervision is about strong leadership. Leaders make accepting challenges productive, experimentation possible, and change more likely. The leadership abilities of the supervisor create the climate for opportunities to become realities.

Grimes and Tilly (1996) suggest leaders are individuals who have a significant influence on others. Leadership does not simply refer to a position of power or designated authority. We can all recall individuals who were leaders but were not people of authority. Likewise, we can recall people who were in positions of authority but did not lead. What makes this difference? Sergiovanni (1992) answers this question in relation to the concept of power. Sergiovanni describes one type of power as that power that emphasizes controlling what others do, when they do it, and how they do it. Alternatively, a more constructive type of power is described as empowering others through shared goals, purposes, and actions. Senge (1994) referred to this as shared vision. Grimes and Tilly (1996) referred to empowering staff when there is a clear message from leadership, a commitment to experimentation and support of staff, and an understanding that the results of efforts will be used to evaluate progress and establish the necessary next steps. Additionally, Patterson (1993) suggests that leadership requires openness to participation, diversity, conflict, reflection, and mistakes.

UNDERSTANDING AND APPRECIATION OF THE CHANGE PROCESS

To effectively lead professional staff a supervisor needs to understand the change process. During the initiation of changing practices, leadership as a supervisor requires disrupting what is currently being practiced in order to gain knowledge and skills in new areas. Fullen and Stiegelbauger (1991) provides insight for supervising in circumstances where change is inevitable. In essence, Fullen suggests regarding uncertainty as common, acknowledging that change will take years to institutionalize, viewing disagreement as expected and valued, and seeing change as a person by person initiative. Given these important considerations, what is a supervisor to do? The answers to this question require careful contemplation.

During change, leaders need to encourage taking risks and experimenting as new information is gained. Just as effective analysis of a problem allows for increased effectiveness of the resulting intervention, effective analysis of the variables in a changing system can enhance the potential for positive and productive results. As staffs learn new and different skills they will make mistakes. Leadership requires tact in positively addressing mistakes and not punishing them. Viewing mistakes as teachable moments for giving better guidance and direction is far more powerful than just pointing out what was wrong. Reinforcing even the smallest efforts of staff when they move in the desired direction is essential. It is also essential not to reinforce undesirable practices, send confusing messages about what is expected, or inadvertently punish positive practice. High frequency reinforcement for doing the expected things is powerful, but so is subtle non-reinforcement. As an example, telling staff that intervention involvement is important but telling them they must adhere to a strict building schedule that inhibits flexibility or availability is counter-productive. If intervention models are to be successfully supported, then staff will need flexibility in scheduling and availability to different teachers and buildings for follow-up.

Effective change takes time. Consequently, making judgments about the impact of new initiatives also takes time. Supervisors should recognize changing practice will have increasing impact over time. Evaluative processes need to be on-going and focused ahead of day-to-day implementation. For example, at Heartland Area Education Agency many innovations that were trained (i.e., progress monitoring, curriculum-based evaluation (Howell & Nolet, 2000), and problem analysis) did not systemically demonstrate themselves consistently for 2–3 years in day-to-day practice. Supervising staff through the adoption of a new approach to practice requires patience. Skills, attitudes, and practice will not change quickly. It is important to assure staff has new skills before they can be expected to attempt new practices. Staff should be expected to give up a current practice only after they have learned new replacement skills. For example, do not require staff to use new skills or technology such as curriculum-based assessments until they are trained on why and how to use them. It is not productive to tell staff what they can no longer do without providing alternative skills. Leaving staff in the dilemma of not being expected to do what they were most accustomed to and not having them trained in a replacement skill will cause agitation and create helplessness in staff. There will be a tendency to view old practices as simpler, easier, more comfortable, and possibly more desirable.

Disagreement is inevitable but fundamental to change. Keep in mind there are many factors that contribute to success or failure. There are no absolutes or guarantees. Supervision should not to be misunderstood for a popularity contest. Address disagreement by allowing input and open communication. If staff is having a difficult time accepting the need for change, then actively engage them on issues of concern. By actively engaging staff in the difficult issues they take more interest in, invest more energy, and ultimately come away with more knowledge and understanding than if left out of the discussions. As staff acquires new knowledge, skills, and roles there may be general discomfort until they become as skilled in the use of the new skills as they were in the use of previous skills being replaced.

It is imperative that supervisors accept staff where they are, continue to show them the intended outcome for practice, and provide them with ongoing support to reach their target. Staff will learn and accept new skills in different ways and at different times. Assuring that new skills are connected both literally and conceptually is important for meaningful change. One-trial learning is not likely. Multiple opportunities to learn, time to practice, opportunity for feedback, and eventual refinement need to be taken into consideration and planned for (National Partnership for Excellence and Accountability in Teaching, 2000).

If staff will be expected to learn and practice new skills, then they will not only need training but new materials with which to practice the new skills they have learned. Providing materials for staff to use is far more effective than expecting staff will create and use them on their own. After all, staff time is valuable and limited. Given a choice between using existing materials or creating new ones, most staff will resort to what is easy to get their hands on. This means that staff may use the very practices we would want them to move away from if the materials for intended use are not more readily available than those typically used. For example, if curriculum-based measures are to be used in lieu of nationally standardized norm-referenced assessments, the access to the probe materials needs to be as easy, if not easier, than the test kit. If not, then staff will continue to use the test kit out of necessity of time and efficiency. This inadvertent reinforcement of old or past practice can substantially slow and limit use and adoption of new methodologies.

VISION OF THE FUTURE AND THE SUBSEQUENT NEEDS OF STAFF

Supervision requires knowledge of current staff needs and trends in the field. Supervision should not just be about helping staff do what they have always done. Leadership requires looking into the future for better answers for today's concerns and facilitating those solutions. This makes supervision of staff a difficult task given the vast range of knowledge and skill required for competent practice. This necessitates focus. It is important we focus on the important outcomes that must be taught and mastered. Supervisors cannot be deterred from their focus by activities that seem interesting but are not related to desired outcomes. Without an outcome orientation, it becomes too easy for staff to fall into patterns of comfortable practice and continue to do what they have always done. Supervisors must have a clear, focused, and well-articulated plan of action from which to lead.

Often changing practice is viewed with an "installation mentality." In other words, we approach systemic change like we approach purchasing a new piece of software. We assume we will get the disk, possibly read the manual, install the program, and we are up and running. This is not possible for the purposes of getting real change to occur. In fact, this approach can confuse issues and make matters worse. If we do a poor job of planning or implementing, then we may, in effect, inoculate the system against future change efforts. For example, training staff to use curriculum-based measures for assessment of academic skill attainment yet continuing to value grade equivalent scores from achievement batteries sends a conflicting message. While experimentation and risk-taking are necessary, short-sighted planning, failure to develop understanding, and poor implementation will have the unintended effect of introducing resistance to doing anything differently. Staff will come to believe that "this too shall pass." A better approach is to start small, work smart, and look for ways to find success on measurable outcomes. Knoff (1995) clearly delineated the necessary process of institutionalization of new innovations. The requirements are (a) establishing improvement as the priority; (b) having personnel guiding services by contributing to new policies; (c) staff receiving ongoing support for innovative practices from leadership; (d) staff develop essential skills, knowledge, and attitudes (staff development); and (e) there is alignment between the vision for change and agency procedures, goals, and roles.

KNOWLEDGE AND SKILLS IN THE INNOVATION AREA(S) BEING CHANGED

Supervisors must completely understand the philosophical basis for the programs and services being implemented. For example, if the organization provides problem-solving, needs-based assessments with data-based interventions, then the supervisor needs to understand the fundamental principles of a problem-solving, needs-based model. Implicitly, the supervisor must be able to define the critical components and the expected outcomes of the innovation area being changed. This may sound rhetorical but it is easy to tell staff what they need to be doing without staff truly understanding what to do or why. Proof of true understanding lies in the supervisor's ability to help staff explain why they are doing what they do. Teaching skills without connections to the critical components, without an appropriate context, and without the fundamental thinking attached will result in only a false appearance that practice is improved. Explicit connections need to be made, demonstrated, and reinforced. It is an oversight to provide training on a new concept or skill and assume that staff will know the intended connections to their current practice or philosophical understanding. By providing clear and meaningful direction, staff is able to see the connections for themselves, they are able to explain their actions to others, and they are able to make decisions in a clear, concise, and reliable fashion. If the answer to questions about why new practices are in place is "because that's just what we do now," or "because my supervisor told me to," then we will not go far with the change process or our long-term plan.

Leaders must to be able to offer broader perspectives on innovations and be able to link different innovations together. In today's educational system it is increasingly important to establish meaningful connections and build on existing programs as resources, time, and opportunities are limited. Without careful consideration, new ideas and practices will be viewed as an "add on" and not be meaningfully embedded within the context of existing practices.

SKILLS IN EVALUATION AND MONITORING

Knowing where staff skills are, where staff skills need to be, and how far staff needs to go to reach desired performance targets is at the crux of supervision. This allows supervisors to set goals, implement plans for change, monitor progress, and make decisions about progress. During times of change, supervisory monitoring of staff is critically important. Staff monitoring is critical to gauge implementation integrity and skill development. Monitoring also informs the supervisor of next steps for staff development. Monitoring points out the need to revisit areas already trained or to provide training in new areas that would be logical next steps in the staff development plan. The supervisor needs to plan staff development aligned with the vision and in relation to current skills. Once the direction is set and the level of current practice is determined, a clear course of staff development opportunities can be crafted to provide the needed skills. Individual and group monitoring allows the supervisor to carefully consider staff progress toward individual and group goals. This information is also helpful to staff in pointing out areas of continued improvement and personal growth. An additional requirement of supervision is to anticipate the next needs of staff to move them to the next level. By organizing staff development to stay in front of the learning curve you are able to guide staff to the next level you intend for them to go.

A frequent question that is asked is, *What do we need to train to promote a problem–solving system?* The answer to the question is another question: *What are the critical components of the problem–solving' process and why?* Too often the problem-solving process is erroneously seen as a simplistic model that does not require the attainment of many, if any, new skills. Problem solving, as a system of service delivery, requires numerous critical components to be in place for successful implementation. At a minimum, methods of operationally defining problems, functional assessment, analyzing problems for intervention design, monitoring student progress, and evaluating data to make reliable and valid decisions are needed. In addition to these essential components is the requirement that staff be skilled in consultation and collaborative teaming. Ikeda, Tilly, Stumme, Volmer, and Allison (1996) described staff development needs in two ways. First, potential areas for staff development should be critically reviewed so that limited resources are not used on training that is not effective for or relevant to problem solving. Second, staff development should be linked to the philosophy inherent in the foundation principles of a problem solving, needs-based model. For example, skills will be required of staff such that problems are specifically and accurately identified and analyzed, interventions are put in place based on the identified relevant features of the problem, interventions are monitored frequently, and intervention results are evaluated to make decisions on effectiveness. Training toward the big picture of system implementation is a must.

UNDERSTANDING OF THE IMPACT OF EDUCATIONAL CHANGE

The practice of school psychology does not occur in a vacuum. Schools are an integral part of many other complex and inter-related systems. As a plan for organizational change is developed it is critical to evaluate the impact of changes in one system on changes in other systems. It is also important to evaluate the unintended effects of organization change efforts. Unintended effects could be either positive or negative. Supervisors, as leaders during institutional change, should assume a role of introducing initiatives to important constituents such as school personnel, parents, and outside agencies in order to minimize unexpected difficulty while taking unnecessary burden off of staff.

District personnel need to understand proposed changes and why they are being considered. In addition, district personnel need to know what will be new and what services will no longer exist. Without this knowledge we invite administrators and teachers to pay too little attention to what staff is doing differently and become focused on what they are no longer receiving. For example, if teachers are focused only on whether or not a student receives an IQ score, then they may not attend to the specific strengths and weaknesses that are derived from a more direct assessment of student skills. District personnel become very accustomed to patterns of services. Without proper information school personnel may not be able to immediately see the intended value of providing services differently.

An aspect of leadership that is often not fully utilized is the provision of information to districts and district staff. Often, school psychologists are instructed on new skills and practice and then expected to introduce these new skills to the district and building staff. This sets up the difficult circumstance of staff's being the bearer of information regarding new or different practices. Additionally, staff is expected to be the implementers of changes. This can inadvertently reduce the acceptability of staff because of the emotional influence and stress related to change. For example, if general education interventions are required, then schools may be concerned with the analysis and monitoring requirements. It is easier for the supervisor to explain the needed requirements so that staff being asked to implement the change are not inadvertently accused of making the requirements more difficult or challenging. This is particularly true when staff is just learning skills themselves and may need support in the assimilation of new practice. As a supervisor, it is possible to introduce issues, changes, and underlying philosophical differences and not have them attributed to staff responsible for implementation.

Parents need to be informed and apprised of changes with clear rationale and explanation. Otherwise, they too may be expecting specific practices based on previous experiences. When parents' expectations are not met they may question and resist without a proper explanation of what has changed and why. Again, supervisors can play a crucial role in parental awareness.

Finally, outside agencies and other allied institutions have come to rely on schools to provide assessment information, often in a very specific way. When a system changes to a problem-solving, needs-based model and new practices are employed, the usual set of information typically found in student files may no longer be available. Without proper groundwork, staff will be inundated with requests to provide the usual sets of information and receive complaints about what is no longer available. For example, waiver services, departments of human services, adult services, or physicians may be accustomed to simply asking for and receiving specific test results. In a needs-based model many of the assessments traditionally performed in schools will no longer be necessary for educational programming. It is important that as staff is trying new methods, learning new skills, and acquiring the critical components of a new system that they are not overly involved in the negative fallout of system level realignment. It is the role of the supervisor to negotiate and navigate these difficult system level issues to divert the attention and emotionality from professional staff.

RECRUITMENT AND MAINTENANCE OF STAFF

A critical responsibility in effective supervision is recruitment. As staff openings occur it is imperative that new staff is carefully selected to meet the current and future needs of the system. It is counterproductive to attempt to move to a new approach to business and not spend significant effort to find the very best individuals who can support the system when opportunity arises. Too often educational agencies simply "fill" positions, go to the local university, or rely on other passive means of filling vacancies. An active, specific, and clearly defined approach to finding, recruiting, hiring, and maintaining the very best trained and philosophically aligned individuals available is fundamental to responsible leadership. When hiring staff from universities or colleges, it is important to recognize not all programs are equal despite being National Association of School Psychologists or American Psychological Association accredited. University programs do not produce individuals with the same skills or philosophical orientation. Hiring individuals who are not philosophically aligned and who do not have strong interpersonal skills is detrimental to institutional change. As a leader it is imperative to know what skills practitioners need and which universities are training students to meet those requirements. This increases the likelihood that students come with the needed attributes and attitudes.

ALIGNMENT OF CRITICAL ELEMENTS WITHIN THE SYSTEM

Supervisors should consider alignment on two levels. One level is conceptual. Are the concepts we are supporting in line with and compatible with each other? Another level is procedural. Are we applying procedures that are in line with each other and in line with the conceptual model? Without these areas of alignment the practices within the system will vary from the philosophy underlying the system. What follows are examples of alignment used at Heartland Area Education Agency to ensure conceptual and procedural matching. Actual examples of how these alignment tools might look are also provided to give a visual representation of the concepts discussed.

Activities and Outcomes. Aligning the problem-solving system with supporting infrastructure is a critical task to build support from within and to reduce confusing practices that detract from the focus of the system change. Alignment starts with a serious look at the critical activities that staff will be expected to be engaged in and what the expected outcomes of those activities will be. This is the point where roles are defined, resources are allocated, and staff actions are prioritized. Secondarily, these activities and outcomes start the framing of staff development needs because staff will be expected to be able to competently perform the activities in order to achieve the expected outcomes. Figure 1 is an example of part of an activity and outcome document. Note the focus on activities and outcomes aligned to a problem-solving orientation.

Figure 1. School psychology activities and outcomes

Activities:	*Outcomes:*
Consultation School psychologists use various consultation models to consult with educators, parents, students, and other professionals or agencies to (a) accurately problem solve and design effective interventions; (b) improve educator, parent, and agency understanding and effective implementation of designed interventions; (c) promote and advance mental health issues of families, children, and youth; and (d) advance the transformation of the educational system to meet the needs of a broadening diversity of children in need.	Evaluation and assessment will be guided by identified problems resulting in individualized, need specific, assessments unique to the student, family, or system. Those involved with interventions will have the knowledge and understanding necessary to carry them out and apply them to other similar conditions. Those working with families, children, and youth will be proactive when addressing the complex needs related to sound mental health for those with whom they work and will be better able to plan and problem solve solutions in a preventative manner. As system-wide changes in education unfold, children, families, and schools will benefit from the most current, research based, adaptations possible.
Assessment School psychologists provide functional assessments that are (a) relevant to the presenting identified problem and student characteristics; (b) efficient and incorporate relevant biological, social, cognitive, and developmental domains; (c) relevant within the context of home and school; and (d) intervention oriented and technically adequate.	Assessment will lead directly to answers to specific questions about the various factors influencing the identified problem. Designed interventions are focused and data based resulting in increased rates of successful change in student performance. Finally, psychometric and best practice considerations are optimized.
Interventions School psychologists assist those with whom they work by helping develop individualized or system-level interventions that improve or resolve the identified problems or concerns by (a) utilizing a problem-solving approach; (b) incorporating applied behavioral analysis to the presenting conditions or the problem; (c) focusing on the appropriate source of the issue be it student, family, or educational system; and (d) collecting data to reflect progress toward the goal and adjusting the intervention as the data indicate.	This ensures the appropriateness of intervention strategies designed for the recipient(s) of the intervention. Interventions can be written on an identified problem that is well defined, incorporates problem analysis, and includes details of the actual intervention (such as what will be done, when it will be done, how it will be done, and by whom) leading to increased integrity in implementation. Students, families, or school systems will demonstrate measurable improvement in the problem area identified because of careful design and implementation of more effective interventions.

Source: Heartland Area Education Agency 11.

Job Descriptions. After activities and outcomes for staff are clearly defined and articulated it is important to include them in the professional job description. A staff members' job description should reflect the activities and outcomes the staff will be expected to perform. This is the first step in productive and responsible recruitment of new staff for the desired skills and orientation for the position. The job description is also a guiding document for staff evaluation. Without a clear job description and role definition there is increased potential for staff to simply continue doing what they always have and for new staff to be hired with a philosophy, orientation, and training that will not promote, enhance, or support the organizations' vision. Figure 2 is part of a job description for school psychology. Note the match in the job description to the previous activities and outcomes.

Professional Staff Evaluation. It was mentioned previously that staff needs a clear set of expectations and a well-articulated plan for performance. The professional staff evaluation plan is the component in the system of supervision that links the activities and outcomes, the job description, and staff development to actual day to day performance. Staff needs to know that there are clear expectations for performance and that they will be professionally evaluated based on their acquisition and demonstration of required system components.

Professional staff evaluation takes on several very important functions during change initiatives. First, it provides a method of performance feedback and monitoring of skills for staff. It shows that specific elements of practice are clearly important and must be accomplished for satisfactory job status. As importantly, it allows staff to celebrate their successful

Figure 2. School psychology job description

Position title: School Psychologist

Primary objective of position:

Provide school psychological services that assist parents and professionals in meeting the educational and mental health needs of children and youth.

Major area of accountability:

1. Develop individualized or system level interventions that improve or resolve the identified problems or concerns.
2. Provide support, instruction, technical assistance, and ongoing monitoring of progress toward measurable, identified goals.
3. Provide functional assessments relevant to the presenting problem and student characteristics and are intervention oriented.
4. Effectively consult and collaborate with educators, parents, students, and other professionals or agencies to improve client services.
5. Provide individual and group counseling to students and their parents.
6. Participate in interdisciplinary staffings to determine the eligibility, appropriate planning, and re-evaluation for students who require special education programs and services.
7. Manage time, organize necessary materials, and communicate with AEA and LEA staff to effectively manage cases in assigned areas.
8. Involvement in research, interpretation of research, and implementing research findings from single subject and group designs.
9. Provide staff development through membership in professional organizations, inservices, consulting, and research.
10. Engage in public awareness activities that assist consumers in understanding services and the anticipated outcomes of these services.
11. Advocate for the civil rights of students.
12. Assist the supervisor of psychological services as directed in the supervision of interns and/or practicum students or personnel assigned by the director.

Source: Heartland Area Education Agency 11.

Figure 3. Professional staff evaluation

Problem solving	C	NI	U

- Demonstrates understanding of conceptual underpinnings and rationale for Heartland's problem-solving approach
- Demonstrates understanding of the function/purpose of an intervention within the educational process at all levels of the problem-solving approach
- Uses resources effectively to plan and implement interventions
- Demonstrates understanding of how to integrate the problem-solving approach into current existing systems (home, community, and school)

Assessment/intervention	C	NI	U

- Clearly identifies problems and determines why they are happening
- Develops intervention plans that clearly address the concern
- Implements or supports implementation of interventions with integrity
- Evaluates the effectiveness of interventions based on analysis of data
- Conducts assessments for the purpose of planning programs and/or considering entitlement for special education that answer both the question of whether or not an individual has an educational disability or not *and* the question of whether or not the student has instructional needs that require special education
- Uses all the components of effective intervention planning to develop IEP and Individual Family Service Plans that address the needs of students

Consultation	C	NI	U

- Identifies specialized expertise among team members
- Collaborates effectively with all teams, outside agencies, families, and children
- Demonstrates the ability to explain intervention: planning through the problem-solving approach to general education, family and other agencies
- Demonstrates awareness of the structure and hierarchy (system) of LEAs and communities in general as well as their assigned LEAs and communities in particular
- Demonstrates awareness of the LEA curriculum and its goals, standards, and benchmarks as it applies to their assigned job description/function, as well as the interaction of curriculum standards and special education instruction/support
- Demonstrates awareness of the Iowa School Improvement process including district-wide assessment
- Uses an effective consultation model(s)
- Communicates effectively
- Models, guides, and assists LEA staff at all levels of the problem solving process

Note: Rating scale definitions: C, competent: Consistently meets the requirements of the assignment; NI, needs improvement: Growth needed to meet the requirements of the assignment; U, unsatisfactory: Does not meet the requirements of the assignment.
Source: Heartland Area Education Agency 11.

demonstration of skills and be reinforced for their accomplishments. In addition, reviewing staff performance on professional evaluations allows the supervisor to holistically evaluate the staffs' attainment and demonstration of skills. The input from this review of what is going well and what is not is critical in the structuring of a staff development plan that is tailored to the individual and group needs of the school psychology staff. Figure 3 is a portion of the Professional Staff Evaluation form used for school psychology. Note the alignment to Activities and Outcomes and the job description for school psychology.

Alignment of Accountability Paperwork. Paperwork is an ever-present part of the school psychologists' job. Paperwork frequently serves an accountability function. It is important that paperwork requirements for the job be changed to match service delivery expectations. This matching of paperwork serves to guide thinking and practice, assures critical components of the system are completely considered, and that necessary events or activities are captured for accountability or justification at different points in the decision-making process. Since paperwork is a required component of any system it is important that we use the paperwork to our advantage in guiding and improving practice.

Forms direct practices and procedural requirement. Forms are therefore developed to capture the critical and necessary aspects of the system. Staff is then trained to complete the paperwork directly. In this approach the content and the format match in a one-to-one fashion. This practice assures that completion of the paperwork complies with the expectation of the system. This process trains the thinking that is required to navigate the system. Figure 4 is an example of part of an intervention plan designed to provide guidance in this way. This format is most useful in guiding the practice and learning during acquisition of new skills. Note the detail in the directions to guide thinking and completion of the form in a way consistent with the underlying expectations of a problem solving system.

Program Evaluation. An important aspect of any change process is program evaluation. Program evaluation must be carefully designed to answer the specific questions important to the system at specific points in time. The evaluation process must be sensitive to change and dynamic in nature in order to continually address the important aspects of system change being considered. Historically, program evaluation is predominantly of a compliance nature. Emphasis is placed on the presence or absence of required information based on review. However, the required data typically has little or no relation to the quality of programs and services being provided. Additionally, the compliance orientation often does not address what are considered critical elements of changing systems in order to provide feedback on how well we implement the system as it was intended.

Comprehensive Service Review (CSR) is used at Heartland in an effort to substantively evaluate the level of adherence of staff to the established practice expectations. This process began with a comprehensive look at system expectations. By delineating the critical elements supervisory staff was able to systematically link the critical components of the new process together in a step-by-step fashion. Once the critical elements were defined by their required sub-parts, standards for acceptable performance were delineated in order to establish a checklist of expected components based on requirements of the adopted system. Actual cases could then be systematically evaluated using the CSR document to establish the level of adherence to the standards of prescribed performance.

The use of the CSR has multiple purposes. Staff is able to see the whole process incorporated within the system in a very linear and pragmatic format. This helps staff see a bigger picture of the system requirements and the linkages throughout the process. From a supervisory perspective it allows for monitoring staff on an individual and group basis with regard to the presence and absence of critical features within the system. This presence and absence of critical features is then linked directly to evaluative issues and staff development needs. Figure 5 is an example of part of the CSR form used for program evaluation. Note the relationship of the CSR form to the initial parts of the intervention plan shown previously.

Innovation Configurations/Rubrics. The use of CSR helps in looking at the presence and absence of critical parts of a process and the linkages between the critical components of the model. The presumption is that the more critical elements that are in place the higher the likelihood of success on an individual student basis. From a supervisory perspective, what the comprehensive service review does not do is look qualitatively at the parts of the system that were present. It is important that evaluation of systems take on both the quantitative (presence or absence) and qualitative (how good or bad) features. These features are independently important but highly connected. For example, without the presence of a particular component of the system it is impossible to judge the component quality. At the same time, the presence of a component does not speak to the accuracy, alignment, quality, or justification of the component with other aspects of the system. For example, if a goal is not present in an intervention plan it is impossible to evaluate the goals' quality in relationship to other aspects of the intervention plan. However, the mere presence of a goal may appear to be positive when, in fact, the goal that

Figure 4. Functional paperwork accountability

Intervention plan

Name:______________________ DOB:__________ Date:__________

Problem statement: Behavioral description of the problem; based on problem analysis

What is the target behavior: should be specific, observable, alterable, measurable and focused within educational setting	
What about the behavior is problematic: should address frequency, latency, intensity, fluency, or accuracy	
What is the level expected for the behavior: based on a specific standard of acceptance	
What standard was utilized: consider peer comparison, curriculum, teacher, policy, etc.	
Level of performance before intervention: baseline or pre-treatment performance	
Discrepancy between expected and actual: this defines the size of the problem now	

Goal: Must be measurable and observable; states direction and extent of target behavior change

Conditions: when and how the student will perform the behavior	
Behavior: what the student will do	
Criterion: the acceptable level of performance	
Time-frame: length of time anticipated for the student to reach the goal level	

Source: Heartland Area Education Agency 11.

Figure 5. Comprehensive service review protocol

CASE REVIEW PROTOCOL

DIRECTIONS: Indicate by checking "Yes" if the component is present and meets the identified standard. Indicate by checking "No" if not present.

Access	Standard	Yes	No
An **Intervention summary** form was present	Screenings were conducted prior to the follow-up date.		
Demographic information	All complete		
Problem analysis summarized (Check those components present. Check yes if all components are present. Check **no** if any is missing.)	___Target behavior ___Assessment questions ___Convergent data collected		
An **Intervention plan** was present	Variety of different forms		
Problem statement (behavioral definition)	Defines difference between expected and actual behavior using objective measurable terms		
Goal (Check those components present. Check yes if all components are present. Check **no** if any is missing.)	___Written ___Measurable ___Related to behavioral definition ___Includes conditions ___Behavior ___Criterion		
Parental participation	Summarized		
Initial level of performance	Baseline data on the target behavior This is a number.		
Procedures/arrangements **Person(s) responsible** (Check those components present. Check yes if all components are present. Check **no** if any is missing.)	___Method of intervention or strategies ___Where (location) procedures will be used ___When (time of day or during what period of day)procedures will be used ___Time (length of time) for intervention ___Frequency (how often, weekly, daily etc.) ___Materials used ___Persons responsible are listed.		
Measurement strategy (Check those components present. Check yes if all components are present. Check **no** if any is missing.)	___Who will collect data ___Data collection methods ___Under what conditions ___Schedule for data collection.		
Decision making plan (Check those components present. Check yes if all components are present. Check **no** if any is missing.)	___Data are graphed or charted ___Number of data points or length of time before data analysis. ___Decision rule		
Follow up date	Recorded		
Level of performance after intervention	Post-intervention data on the target behavior. This is a number.		
Summary of outcome data	Written summary of outcomes of intervention. Includes interpretation of data		

Source: Heartland Area Education Agency 11.

is present is unrelated to the defined targeted behavior and there are no evaluation procedures in place that will allow the goal to be accurately or meaningfully measured. Rubrics or innovation configurations (Hord, Rutherford, Huling-Austin, & Hall, 1987) are extremely helpful in the establishment and supervision of quality indicators in system reform. Figure 6 is an example of an innovation configuration used to evaluate Individual Education Plan (IEP) development. This rubric allows for the qualitative evaluation of an IEP both at a specific point in time and also across time for monitoring purposes.

Figure 6. **Innovation configuration for IEP development**

IEP RUBRIC

Indicator	Not Present 0	Partial 1	Complete 2
Student and family long range expectations	No statement is included.		A statement is included.
PLEP: Content for instructional planning	No reference to either general education curriculum or student instructional needs.	Reference to general education curriculum *or* student needs is included in the PLEP statements.	The PLEP statements include student's accomplishments in general education curriculum or participation in appropriate activities *and* identifies needs of the student.
PLEP: Content needed for decision making	Current levels of performance are not established.	Current levels of performance are established. Current discrepancy *or* current level of independence is identified.	Current levels of performance are established. Current discrepancy *and* level of independence or prediction of independence are included in PLEP.
Baseline	No baseline documented.	Vague description of students current behavior or academics.	Specific baseline clearly representing target behavior expressed in quantitative manner.
Behavior in goal	Behavior in goal is not same as that identified in baseline.	Behavior in the goal is same as that identified in baseline, but is nonspecific and not measurable.	Behavior is stated in specific measurable terms and is the same as that identified in baseline.
Goal components	More that one component of goal missing (time frame, conditions, behavior, and criterion).	Goals contain all but one component (time frame, conditions, behavior, and criterion).	Goal contains time frame, conditions, behavior, and criterion.
Evaluation procedures	Not specified.	A schedule for evaluation progress is identified. Progress is monitored less frequently than once per week.	Evaluation procedures are planned to be frequent and repeatable. Progress is monitored at least once per week.

Source: Heartland Area Education Agency 11.

SUMMARY

Supervision is a complex and demanding array of responsibilities and opportunities. Leadership, as a supervisory charge, is essential for meeting the daily and long-term demands of supervisors. If a central theme of supervision is building and supporting the competencies of school psychology staff, then it requires supervisors to be attuned to immediate and long-term needs of staff. A systemic focus is important to recognize the impact of change and unintended effects. Staff development and on-going training and support of staff is a core necessity of building and maintaining staff performance once strong staff are recruited. Finally, aligning the infrastructure to support staff and system priorities will help train, promote, and strengthen the institutionalization of changes.

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Grimes, J., & Tilly, D. (1996). Policy and process: Means to lasting educational change. *School Psychology Review, 25*(4), 465–476.

This article provides an excellent overview of the systemic change process in Iowa. It provides information on the foundational considerations and key concepts for consideration. This is a must article for those seeking information on critical components and characteristics of an institutional change process from a state level perspective.

Ikeda, M., Tilly, D., Stumme, J., Volmer, L., & Allison, R. (1996). Agency-wide implementation of problem solving consultation: Foundations, current implementation, and future directions. *School Psychology Quarterly, 11*(3), 228–243.

This article provides insight on agency-wide implementation of a problem-solving, needs-based approach to providing student services. Critical components of the problem solving consultation, as practiced by Heartland Area Education Agency 11, are delineated and described. Case examples are also included.

McIntosh, D., & Phelps, L. (2000). Supervision in school psychology: Where will the future take us? *Psychology in the Schools, 37*(1), 33–38.

This recent article provides a concise overview of issues in supervision. Included in the discussion are definitions of supervision, differing types of supervision, and a view of the research in supervision issues. This article concludes with a discussion of the future needs and considerations in the area of school psychology supervision.

Sergiovanni, T. J. (1992). *Moral leadership: Getting to the heart of school improvement.* San Francisco: Jossey-Bass.

This book provides a view of leadership premised on moral leadership and empowerment. Discussion and examples are provided that illustrate the concepts of leadership based on empowerment as opposed to leadership based on power or cohesion. This is a good book for expanding current thinking on how leadership might be envisioned.

Reschly, D., & Ysseldyke, J. (1995). School psychology paradigm shift. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology III.* Washington, DC: National Association of School Psychologists.

This article chronicles the highlights of historical school psychology practice and the underlying premises on which services were defined and provided. Problems with current practice are delineated and discussed providing a rationale for the introduction of a different service delivery system based on advances in assessment and intervention practices. A problem-solving process is described as an alternative delivery system. Major considerations and concerns are posed and briefly discussed.

9

Best Practices in the Supervision of Interns

Jane Close Conoley and Jeremy R. Sullivan
Texas A&M University

OVERVIEW

Supervision is "an interpersonal interaction between two or more individuals for the purpose of sharing knowledge, assessing professional competencies, and providing objective feedback with the terminal goals of developing new competencies, facilitating effective delivery of psychological services, and maintaining professional competencies" (McIntosh & Phelps, 2000, pp. 33–34). Effective supervision of school psychology interns can accomplish several goals. The most important may be developing autonomous skills in direct services such as assessment, psychotherapy, and consultation; learning to translate knowledge into informed, competent practice; learning to apply the most recent ethical guidelines to professional practice; and receiving opportunities to share personal and professional experiences with others on a regular basis (Crespi & Lopez, 1998). Considering these objectives indicates the importance of the supervisor's role in the professional training of school psychologists.

Supervision can be conducted in either an individual or group format, both of which are widely practiced. Advantages of group supervision include peer feedback and support, and exposure to a wider variety of cases, assessment techniques, and diagnostic and treatment issues (Riva & Cornish, 1995). Frequent topics discussed in supervision include ethical and legal issues, advanced clinical skills, assessment and evaluation, diagnosis, theories of psychotherapy, crisis intervention, and administrative issues. Common methods of assessing clinical skills include the use of audiotapes, videotapes, and role plays, in addition to evaluating the accuracy and sophistication of case conceptualizations (e.g., determining proximal and distal factors contributing to clients' issues, considering different levels and methods of intervention, and considering clients' strengths and weaknesses and ways of capitalizing on strengths and improving upon areas of weakness).

Both the American Psychological Association (American Psychological Association, 1981, 1992) and the National Association of School Psychologists (National Association of School Psychologists, 1994, 1997) regard supervision as essential to the professional development and practice of school psychologists and, therefore, regulate the provision of supervision. There is, however, a relative paucity of published literature and empirical research devoted to this area within the field of school psychology, especially when compared to the amount of literature related to supervision published in the fields of clinical and counseling psychology (McIntosh & Phelps, 2000). In addition, most supervisors report limited academic training in supervision and limited access to peer supervision (Robiner, Saltzman, Hoberman, & Schirvar, 1997; Zins, Murphy, & Wess, 1989). The recently published *Effective Supervision in School Psychology* (Harvey & Struzziero, 2000) represents an attempt to consolidate, and draw practical implications from, the literature regarding school psychology supervision. This volume will likely become a popular and important contribution to the field.

An important first step in exploring the supervisory process is for supervisors to attend to and review their own skills, knowledge, and vision for the supervisory relationship. Part of this self-assessment deals with developing a theoretical model to guide supervisory behavior; another deals with constructing standards of behavior between supervisor and supervisee; and, finally, part has to do with creating a plan to engage the intern in informed and ethical decision making in the complex problems facing school psychologists in the new millennium.

The present chapter will consider the needs of the supervisor, the intern, and the client from a number of perspectives. Supervision is carried out with overlapping responsibilities to the intern, the training site, the intern's academic program, and the client. A first step for supervisors is to identify which existing supervisory model is closest to their own theoretical orientation, and to then begin a process of exploration and study.

MODELS OF SUPERVISION: BASIC CONSIDERATIONS

There are several models of supervision based on various theoretical orientations within developmental and clinical psychology, including psychodynamic, client-centered, behavioral, and developmental. Brief comments on each of these models follow. It must be noted that this list is not exhaustive; other models exist (e.g., the case study or case analysis approach).

Psychodynamic Supervision

The primary focus of psychodynamic supervision is on supervisees learning to use themselves effectively in helping relationships. This is accomplished primarily by concentrating on the dynamics of the supervisory relationship in order to monitor constructive or destructive ways of relating to or reacting to others. It is assumed that understanding the relationship dynamics of the supervisor and supervisee will generalize to understanding the dynamics between supervisees and their clients.

Supervisors must build a working alliance with their supervisees. This alliance should be based on a willingness to work together to improve the effectiveness of the intern's clinical skills. Proponents of this model suggest that unresolved personal issues of supervisees (and supervisors) are major impediments to development and growth (Thorenson, Miller, & Krauskopf, 1989). There is little research to support the psychodynamic model. The danger of creating psychotherapeutic rather than supervisory interactions between supervisor and intern has been suggested (Doehrman, 1976) as a key concern with this model.

Client-Centered Supervision

Growing from Rogers' (1958) seminal work in humanistic psychology, client-centered supervision seeks to establish conditions between supervisor and intern that mirror the conditions that are necessary for effective psychotherapy. The therapeutic conditions of psychological contact, congruence, unconditional positive regard, empathy, and warmth are the conditions both necessary and sufficient to foster enhanced self-exploration. Interns must be taught how to create and communicate each of these conditions in their relationships with clients. From this perspective the intern's own professional development in this regard depends on the supervisor's skills in creating and communicating these therapeutic conditions.

Videotapes or audiotapes, modeling, role-plays, and live demonstrations are often components of client-centered supervision. Personal therapy is seen as a very important way of increasing interns' expertise in interpersonal relationships. The demand that supervisors model and implement the same interpersonal and relational conditions that are desired in the interns' therapeutic endeavors has some intuitive appeal. Research indicates, however, that supervisors must teach specific techniques and skills as well as facilitate a supportive environment in order to increase supervisees' effectiveness (Forsyth & Ivey, 1980).

Behavioral Supervision

With the behavioral model, the judgment of proficient performance is based on learned skills. Supervisors must teach appropriate behaviors and extinguish inappropriate ones. Each of the intern's jobs or professional activities can be broken into identifiable tasks with associated skills. The supervisor should use the same behavioral principles with the intern as are used in counseling or therapy situations (Delaney, 1972).

Mutual assessment of skill deficits and strengths are followed by a shared commitment as to the steps to be taken to meet measurable goals. Frequent feedback is provided regarding current progress toward goal attainment. Supervision is conducted through an individualized contract of specific behavioral goals and identification of the means for attaining these goals. The major steps of behavioral supervision are as follows: (a) establish a relationship between supervisor and intern, (b) assess current level of skills, (c) set goals for supervision, (d) generate and implement strategies to accomplish supervision goals, and (e) evaluate the effectiveness of strategies and generalization of learning.

The failure to provide feedback and provide for remedial activities is often the basis for ethical complaints filed by supervisees (Freeman, 1985; Keith-Spiegel & Koocher, 1985). A strength of the behavioral approach is the demand for clear communication and careful monitoring of skill development. A weakness may be a lack of oversight of the intern's personal dynamics that can affect therapeutic effectiveness.

Developmental Supervision

According to this model, supervisees pass through predictable stages or levels on their journey from apprentices to masters (Stoltenberg & Delworth, 1987). Beginning interns may lack confidence and are dependent on the supervisor for advice and direction. At this early stage, interns often are very cautious and concerned about how to do things the right way, and may not have much insight into their own behavior or its potential impact.

With some experience, many interns begin to experience a conflict between dependence and autonomy. Feelings of confidence are quickly replaced by feelings of being overwhelmed. Supervisors and supervisees may have disagreements over the "correct" way to handle different situations.

Eventually, a firmer sense of identity and self-confidence evolves. The intern becomes more tolerant of differences and is increasingly more flexible in choosing approaches to solve problems. In addition, the supervisee seeks help and advice without feeling overly dependent on the supervisor.

Excellent supervisors change their behaviors (from advice giving to support) according to the needs and developmental level of their supervisees. They do not overreact to predictable conflicts and are patient with interns' early feelings of helplessness and dependence.

Model Synthesis

The personal style of the supervisor and intern, the supervisor's and the intern's characteristics, and previous experiences with supervisors will all interact in choosing a particular model of supervision. The best supervisors may be those who have been able to manage a flexible blending of the above (and other) perspectives, thereby taking an integrated approach to supervision, and one that can be adapted to meet the unique needs of individual interns. The most effective supervisors provide structured resources for interns in terms of goals and learning experiences while making sure to emphasize the personal impact of the intern on clinical success. The personal impact of the intern is a function of his or her ability to carry interventions through to successful completion through careful planning, evaluation, and coordination of the efforts of other persons involved. Experience has indicated that powerful technologies are wasted if psychologists cannot gain the investment of staff members and families in their intervention efforts. Gaining such investment is rarely dependent simply on the power of a good idea. Interns (and supervisors!) must have the interpersonal skills and social awareness to attract and maintain collaborations.

BEST PRACTICES

Assessment of Supervisory Skills

In addition to meeting the requirements for being a supervisor from the relevant professional organizations (e.g., school psychologists with continuing credentials; doctoral, licensed psychologists), supervisors should reflect upon their own supervisory skills and experience in order to prepare for the supervisory role. Appendix A is a suggested format for rating the supervisor's skills. Completing this assessment may provide supervisors with some important learning goals and information about blind spots in their own behaviors.

For example, the supervisor's comfort with allowing independence among interns is very important to analyze. Interns (Kramer, Conoley, Bischoff, & Benes, 1991) often describe supervisors as too laissez-faire (i.e., tending to allow for too much independence) or as too controlling. Given the developmental issues raised above (Stoltenberg & Delworth, 1987), it is vital that supervisors be aware of and evaluate their general stance toward the autonomy of the intern and the ways this stance may be modified according to intern preferences and competencies, or client situations.

Evaluating Intern Skills

A successful supervisor must develop a number of strategies for evaluating the level of intern skills so that appropriate teaching plans can be made and assessment activities accomplished. The critical issues for the supervisor to investigate are as follows.

1. Competence: Does the intern have the necessary skills, techniques, and knowledge to take appropriate action? Psychologists must be expert in implementing and interpreting numerous assessment procedures, performing direct interventions with children and their families such as counseling and behavior modification, and indirect interventions (e.g., consultation, research, and program evaluation).

2. Emotional awareness: Can the intern use his or her own emotions and reactions to understand and empathize with others? Supervisors must target interns' communication skills, interpersonal relationships, and personal stability as potential areas for change if problems are apparent.

3. Identity: Does the intern develop a consistent way of thinking about problems and planning actions?

4. Respect for individual differences: Does the intern make an active effort to understand and appreciate cultural or ethnic (or other) differences? Is basic respect present for alternative lifestyles and choices?

5. Purpose and direction: Can the supervisee formulate plans, identify short- and long-term goals, and monitor progress? Research training should have prepared interns to conduct $N = 1$ studies, collect data, and evaluate outcomes. Intervention or assessment without outcome-based evaluation is questionable practice.

6. Autonomy: Can the supervisee make choices and decisions independently? Is there an appropriate degree of self-management?

7. Ethics: Are ethical issues, values, and standards integrated into practice?

8. Motivation: Is the intern internally motivated, finding work rewarding and meaningful?

Making informed judgments along these dimensions will demand that the supervisor meet individually with the intern, observe the intern's professional functioning, and collect evaluations from others who are directly involved with the intern. An evaluation instrument that may serve as a starting point in constructing an internship evaluation is reproduced as Appendix B. This instrument is completed twice each year. The completion of the rating form serves as a way for the supervisor and intern to discuss progress at the end of the first half of the internship and again near the end of the experience.

It is also of great importance to develop ways to provide ongoing feedback to interns and give them help in organizing their work. Appendix C is an example of a Progress Monitoring Sheet used to give interns information about their cases and about the success of their interventions. The form is designed to be completed in duplicate so the intern has a record of suggestions developed during supervision, and the supervisor has a record of what issues and strategies deserve follow-up attention.

Ethics and Equity Issues

School psychologists face enormously complex and often ambiguous ethical dilemmas. In addition, supervisors must clearly understand the boundaries that delimit supervisory relationships in terms of exploitation and equity (e.g., appropriate work expectations or gender equity issues).

INTERNS

Although the entire practice of psychology is governed by law and ethics, the practice of school psychology has additional demands from laws specific to education and the ethical dilemmas posed by continuous interactions with minor clients (Jacob-Timm & Hartshorne, 1998). It is clear that intern supervisors should always determine the intern's level of knowledge about current ethical standards and educational laws and regulations as well as associated state mental health laws. Supervisors must assess this knowledge at the very start of the internship experience, so interns can be given any needed information immediately.

Beyond knowledge, however, is the ability to apply these principles to daily decision making. Although research supporting the effectiveness of didactic training in ethics is mixed (Welfel, 1992), the efficacy of positive modeling by the supervisor and careful monitoring of the intern's behavior must be accepted as a powerful force influencing interns. Supervisors might find it useful to study Kitchener (1984) and Rest (1984) for information (beyond mere listings of principles) that is useful in developing the ethical decision making and moral development of their interns.

Rest (1984) suggests that an ethical person must have (a) empathy, (b) well-understood rationales for deciding which of the options in a dilemma is morally right or comes closest to one's ideals, (c) ways of selecting among competing values and motivations so that a plan of action can be made, and (d) the characteristics that allow plans of action to be implemented, such as resoluteness and perseverance.

Kitchener (1984) provides assistance for ethical decision making, especially for deciding among options. She delineates five critical ethical principles for the evaluation of ethical dilemmas in psychology. These principles are autonomy, beneficence, nonmaleficence, justice, and fidelity. Although each of these principles has many applications, a few examples suggest the richness of Kitchener's (1984) thinking.

Interns should know that a commitment to autonomy underlies our pledge of confidentiality and care in dealing with records. Respecting and promoting others' control of their lives is a key element of establishing therapeutic relationships. Dealing with autonomy concerns with children is quite sensitive. For example, how does the intern handle disclosures from adolescents that implicate family members as abusers but are unlikely to result in the child's removal from the home? How is confidentiality protected when so many professionals have a "need to know" about children?

Non-maleficence means a promise to "above all, do no harm" and beneficence is associated with psychology as a science and practice dedicated to promoting human welfare. Trainees and supervisors must examine their competencies, the potential negative impact of assessments and interventions, and the client's and client family's civil rights when choosing treatment and assessment options. Unfortunately, there is frequently a price associated with every positive change, and interns are often unaware that their interventions or assessments may inadvertently do harm. It is critical to be able to sort through the likely harm and good associated with our professional intrusions into other people's lives.

Justice means being dedicated to fairness. School psychologists are necessarily concerned that each child has access to an appropriate education. How are situations resolved when one child's access is deleterious to another's? Can a common good be discerned in every situation?

Finally, fidelity refers to honesty in fulfilling commitments and being consistent. Fidelity is owed to children, teachers, school systems, families, and colleagues, and also to personal ethics.

Each of these guiding principles may place differing and sometimes competing demands upon the intern, often with compelling rationales. Too often supervisors and interns may believe that knowing the lists of ethical principles from the National Association of School Psychologists (1997) and the American Psychological Association (1992) will suffice with respect to ethical competencies. Given the rising numbers of ethical complaints filed against psychologists, however, more attention to high-level ethical thinking seems warranted. In addition, ethical challenges raised by HIV-AIDS, teenage health and sexuality, culturally sensitive assessment and intervention efforts, and the changing expectations regarding school psychologists all suggest that ethical training is of critical importance.

Supervisors may appropriately anticipate that interns come to their sites with significant knowledge bases in ethics. The actual formation of ethical practice occurs, however, during intense practice. Internship is, therefore, a prime time to develop ethical frameworks that will be useful throughout a professional career.

SUPERVISORS

Supervisors have many ethical responsibilities toward their interns. Paramount among these may be the management of the supervisory relationship to ensure that it is equitable. All dual relationships (e.g., intimate friendships, joint business ventures) with supervisees are problematic (Kitchener, 1988) but sexual relationships are expressly forbidden (Bartell & Rubin, 1990; Pope, 1989). At the very least, the supervisor who engages in sexual relationships with interns has failed to model appropriate professional interactions and so has failed to fulfill an important element of his or her contract with the intern.

Sexual harassment and racial (and other) prejudice are present in most or all of our major societal institutions. Supervisors must be alert to even subtle instances of such in their own and their interns' behaviors. It may be useful for supervisors to consult the *Guidelines for Providers of Services to Ethnic, Linguistic, and Culturally Diverse Populations* (American Psychological Association, 1990).

Interns' Perspectives and Suggestions for Supervisors

In determining best practices in supervision, it is important to explore how interns feel about the process of supervision, including their expectations and what they value most and least about supervision and supervisors. These perspectives are helpful in facilitating the generation of specific suggestions for supervisors. The themes and suggestions outlined below come from four sources: (a) the interns in the Nebraska Consortium were asked to provide input regarding the quality of their internship experiences between 1986 and 1996 ($N = 90$); (b) the second author of the previous edition of this chapter (Conoley & Bahns, 1995) interviewed students who had completed field placements regarding their experience of being supervised ($N = 20$); (c) the second author of the present chapter solicited similar information from school psychology doctoral students at Texas A&M University who were involved in various supervised practicum experiences ($N = 10$); and (d) the authors consulted published empirical research and conceptual papers in the field of supervision.

Perhaps the most important message to be taken from the following discussion is that supervisors would be wise to elicit a careful consideration of these issues at the beginning of the supervisory relationship.

SUPERVISOR AVAILABILITY

Interns are sensitive to the accessibility of their supervisors. Even when they perceive the supervisor to be talented and competent, difficulties in contacting a supervisor during a critical period or in arranging for regular supervision result in poor evaluations and a diminished experience. Two hours each week of individual supervision must be given to the interns in addition to other group staffing and educational experiences (e.g., case presentations, workshops). Supervisors should be permitted to have only the number of interns who can be adequately served and must be well organized to have supervisory time available.

DEPENDENCE VERSUS INDEPENDENCE

Most interns seem to value a large amount of direction from supervisors, especially at the initial stages of the internship (per the developmental model described above). For example, many interns want assistance especially with understanding and conceptualizing cases, and prefer specific direction over general suggestions. On the other hand, interns do not appear to value authoritarian supervisors who insist on only one correct approach to clinical situations.

The bottom line may be this: interns value direction but want many options from which to choose, and do not want to be told *exactly* what to do. They desire supervision that helps them get "unstuck" and that forces them to think for themselves about clients. Of course, the extent to which interns desire dependence or independence is extremely variable, and should be determined by the supervisor on a case-by-case basis.

INTERN EXPECTATIONS

Briefly, interns generally expect that supervisors will be highly knowledgeable in both theory and practice, use a research-based framework to provide services, respect the intern's personal style of providing services, be supportive, and hold very high expectations for the interns. Supervisors are expected to help interns formulate hypotheses and construct case conceptualizations, in addition to exploring all possibilities or competing scenarios regarding clients and their treatment. Some interns especially value a highly structured approach to supervision and cases, and desire frequent feedback on competency and skill development. Further, interns expect the supervisor to be positive and encouraging, picking up on what the intern could have done differently in a case without being overly critical, judgmental, or negative.

CREATING A SAFE PLACE

Because many interns are anxious and insecure about providing services, and also about the ongoing evaluation that accompanies supervision, it is essential that the supervisor create a "safe place" in supervision, wherein personal and professional growth is enhanced and fear is minimized (Emerson, 1996). This can be accomplished by creating an environment conducive to trust and open communication, never putting interns down, using humor, involving interns in decision making, treating interns fairly and with respect, and ensuring confidentiality. Both the supervision literature and student responses indicate that constant support and persistent encouragement are very important to interns, and can help to enhance their self-confidence, thereby facilitating skill improvement. It may be helpful for supervisors to remember the "One for Two Rule": for every *one* correction or criticism the supervisor offers the intern, the supervisor should provide *two* compliments or positive statements. This may help in keeping the overall climate of supervision positive and supportive, even when the supervisor must give constructive criticism.

CULTURAL AWARENESS

Fukuyama (1994) discusses some of the issues in multicultural supervision with ethnic minority trainees. Of primary importance among minority interns is the feeling that neither they nor their cases are stereotyped by the supervisor. Further, minority interns feel supported when the supervisor expresses belief in the interns' abilities to work with and engage challenging clients, and when the supervisor initiates discussion of multicultural issues and expresses a general cultural awareness and sensitivity (e.g., acknowledging a religious holiday). In contrast, lack of awareness of cultural-specific norms and use of slang or stereotypes can severely harm the relationship between supervisor and intern, leaving the intern feeling hurt and insulted.

Of course, the expression of support, acceptance, and awareness is important to all interns, not just those who happen to be members of minority groups. Supervisors should be aware, however, that minority interns are often "one of a kind" at an internship placement and can experience all the unique stresses of such tokenism. This situation calls for special sensitivity.

TIME MANAGEMENT

Although all interns expect to work hard, most are unprepared for the intensity of the internship experience. Interns commonly report feeling overwhelmed by the demands on their time and unaware that they should take some responsibility for controlling their assignments. They report feeling unwilling to refuse any assignment. This occurs sometimes because they (ambitiously) want to learn everything and sometimes because they fear a negative reaction if they object or hesitate. Very often they lack basic time management and assertiveness skills. These predictable problems sometimes result in interns' engaging in activities that are not appropriate for their role. Not only do they fail to set limits with supervisors, they set no limits with anyone else! Supervisors should be prepared to teach these professional management skills to interns by their own example.

EXPLOITATION OF SKILLS

Some institutions use interns as cheap sources of labor for repetitive or unpopular tasks without a concomitant commitment to training. This attitude is easily discerned by the interns, who resent that their work for the organization is not met with a return of training opportunities. Internships are organized training experiences, not mere on-the-job experiences. This basic fact about internships is often not well understood at the internship site. Careful cooperation between university and internship faculty must be maintained to be sure that everyone stays invested in *teaching* the interns, not merely using them to ease the strain of overflowing caseloads.

NEGATIVE SUPERVISOR ATTITUDES

Interns are disillusioned by supervisors who are pessimistic or cynical about professional functioning. Often, under the guise of teaching the intern what the real world is like, supervisors fail to model enthusiasm and optimism in their work. Supervisors may act like victims in their systems rather than instructing interns on how to approach the long and difficult processes of organizational change. Interns may learn more negative information than positive steps to create change.

PERSONAL CONCERNS

The 9-month internship for educational specialist students or the 12-month experience for doctoral students occurs in the context of family, financial, health, and academic concerns for many interns. These and other concerns warrant attention from supervisors. Although problems in these areas can rarely be solved by supervisors, all interns seem to appreciate being known in their complexity by their supervisors. Some mutual appreciation of what the training site is offering the intern and what the intern is sacrificing to finish the demanding degree program can help both sides keep ultimate goals in view.

SUMMARY

The internship experience is often regarded as the pinnacle of graduate training in school psychology. Indeed, it represents the culmination of years of coursework, practicum experience, and research, and offers interns the opportunity to integrate all they have learned with the ultimate purpose of refining clinical skills and promoting ethical practice. Supervisor competence and commitment, therefore, are critical. All supervisors must be well versed both in current guidelines from their professional organizations (American Psychological Association, 1981, 1992; National Association of School Psychologists, 1994, 1997) that speak to basic expectations regarding state-of-the-art training of interns, and in the research supporting supervisory processes (Crespi & Lopez, 1998; Robiner & Schofield, 1990). Furthermore, they must be cognizant of their own competencies in assuming an educative role with others. These competencies include knowledge, ethics, patience, and personal functioning. The exact sequence of activities offered to interns should be well articulated and responsive to the intern's strengths and weaknesses and academic program expectations. Interns should be offered experiences in the best of professional functioning if the field is to progress. Tired, old, and invalid test batteries, and treatment methods known to have limited effectiveness, should not be imposed on interns, who may arrive at their sites with information new and useful to the supervisors. Enthusiastic interns should be schooled in the complexities of working in systems that have yet to understand the great potential of psychology.

The vitality of psychology in the schools depends on every supervisor who mentors an intern to high levels of skill, compassion, and the certainty that school psychologists can make a huge contribution to children, families, and the educational enterprise.

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Provides information regarding supervision specific to the field of school psychology, in terms of internship

objectives, supervisor qualifications, training responsibilities, and supervisory evaluation. Includes useful guidelines for the provision of supervisory services in detail beyond the scope of the present chapter, in addition to sample supervisor and intern evaluation forms.

Fukuyama, M. A. (1994). Critical incidents in multicultural counseling supervision: A phenomenological approach to supervision research. *Counselor Education and Supervision, 34,* 142–151.
Discusses the importance of cultural awareness and other competencies that must be demonstrated by supervisors working with ethnic minority interns. Fukuyama provides examples of what supervisors can do to make their interns feel accepted and supported, and offers suggestions for making supervision more culturally sensitive.

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Developmental levels of trainees are described over eight dimensions: intervention skills, assessment techniques, interpersonal assessment, client conceptualization, individual differences, theoretical orientation, treatment goals and plans, and professional ethics. Progress is traced by using three structures: awareness of self and others, motivation, and autonomy.

APPENDIX A

Self-Assessment of Supervisor Skills and Knowledge

	Needs				*Expert*
Teaching Skills					
Identify learning needs	1	2	3	4	5
Write learning goals	1	2	3	4	5
Devise instructional strategies	1	2	3	4	5
Present material didactically	1	2	3	4	5
Present material experientially to explain rationale of intervention	1	2	3	4	5
Evaluate learning	1	2	3	4	5
Comfort in authority role	1	2	3	4	5
Give constructive feedback	1	2	3	4	5
Intervention Skills					
Possess appropriate knowledge bases	1	2	3	4	5
Establish rapport	1	2	3	4	5
Create motivation	1	2	3	4	5
Challenge existing knowledge and attitudes	1	2	3	4	5
Facilitate exploration of skills	1	2	3	4	5
Facilitate exploration of feelings	1	2	3	4	5
Knowledge of interpersonal dynamics	1	2	3	4	5
Model appropriate skills	1	2	3	4	5
Respond with flexibility	1	2	3	4	5
Integrate data into case conceptualization	1	2	3	4	5
Consultation Skills					
Assess problem situation	1	2	3	4	5
Provide alternative interventions or case conceptualizations	1	2	3	4	5
Facilitate brainstorming	1	2	3	4	5
Encourage choices, responsibility	1	2	3	4	5
Function in collegial, collaborative manner	1	2	3	4	5
Manage group/team process	1	2	3	4	5
Commitment to Ethics and Equity					
Knowledge of current ethical standards	1	2	3	4	5
Skills in application of ethics to complex situations	1	2	3	4	5
Skills in enhancing the moral development of interns	1	2	3	4	5
Commitment to creating nonexploitative relationships	1	2	3	4	5
Commitment to equal opportunity	1	2	3	4	5

The following questions may be helpful in framing some of the important issues.

1. In which supervisory role do you have the most experience? Teacher, consultant, counselor? In which do you have the least experience?
2. What is your preferred style?
3. What feedback have you received about your supervision? For example, do you over explain, are uninvolved, are too verbose, can give examples, are challenging as well as facilitative.
4. What strengths and limitations do you see in your supervision style? How might the strengths be used and the weaknesses be addressed?
5. With what types of learners (interns) are you most comfortable? Consider ethnic, cultural, racial, sexual preference, and disability groups when you reflect upon this answer.
6. Can you remember an event of effective supervision you experienced during your training? Do you remember an ineffective incident? Describe the critical dimensions of each.
7. What did you look for in a supervisor? What worked best for you?

APPENDIX B

Psychology Intern Evaluation
Nebraska Internship Consortium in Professional Psychology

Date of Evaluation ________________________

Intern ________________________

Training Director ________________________

Directions: The ratings of the intern should be based upon actual observation and/or reports from staff, clients, families, etc. Choose the number of the scale that best describes the intern's competence. A description of scale points is provided below.

1 - Competence is considered to be in need of further training. Intern seems to lack basic professional maturation in this area. Skill development seems doubtful.
2 - Competence is currently considered below average, but supervision and experience are expected to develop the skill. Close supervision is required.
3 - Competence is at an average level for functioning with moderate supervision.
4 - Competence is assessed to be above average suggesting only a minimal need for supervision.
5 - Competence is very well developed and reflects a capacity for independent functioning with little or no supervision required.
No data - Insufficient information to make a rating at this time.

General Competencies

Rating *Strengths/Comments*

---

1. Evaluation: Assessment
____ Intellectual ________________
____ Social emotional ________________
____ Interviewing skills ________________
____ Behavioral assessment ________________
____ Personality assessment ________________
____ Curriculum-based assessment ________________
____ Environmental assessment ________________
____ Neuropsychological assessment ________________
____ Family assessment ________________
____ Ability to integrate data ________________
____ Other ________________

2. Intervention
____ Practicality ________________
____ Appropriateness to problems ________________
____ Specificity of recommendations ________________
____ Conceptual clarity ________________
____ Provision for follow-up ________________
____ Implementation ________________
____ Actual follow-up ________________
____ Flexibility ________________

3. Communication and Collaboration
____ Staff conferencing ________________
____ Parent conferencing ________________
____ Administrative conferencing ________________
____ Case staffing ________________
____ Report writing ________________
____ Use of supervisory input ________________

4. Consultation
____ Problem/need identification ____________________
____ Plan formulation ____________________
____ Plan implementation ____________________
____ Follow-up and evaluation ____________________
____ Family consultation ____________________
____ Primary caregiver consultation ____________________
____ Staff consultation ____________________

5. Teaching/Workshop Presentation Skills
____ Planning ____________________
____ Implementation ____________________
____ Evaluation ____________________

6. Interpersonal Skills
____ Confidentiality ____________________
____ Enthusiasm ____________________
____ Dependability ____________________
____ Promptness ____________________
____ Creativity ____________________
____ Productivity ____________________
Rapport with
____ Clients ____________________
____ Staff ____________________
____ Parents ____________________

7. Research/Program Evaluation
____ Planning ____________________
____ Implementation ____________________
____ Provision for subject rights ____________________
____ Provision for confidentiality ____________________

8. Overall rating of the intern 1 2 3 4 5

Please summarize any intern strengths or weaknesses not mentioned on the above rating scale. Note any training experiences that should be planned for this intern.

____
____
____
____
____

I have read and understand this evaluation.

________________________ ________________________
Psychology Intern Date

APPENDIX C

Supervision Progress Notes

Notes to

From

Date

Regarding

We discussed these concerns

Possible strategies

		Effective	Not Effective
Tried:	1.	___	___
	2.	___	___
	3.	___	___
	4.	___	___

Comments on concern? New problem definition? Or new information?

10

Best Practices in Planning School Psychology Service Delivery Programs: An Update

Mel Franklin
Amphitheater School District (Retired)
Tucson, Arizona
Stephen M. Duley
Amphitheater School District
Tucson, Arizona

OVERVIEW

The increasing complexity of society has placed greater demands upon the school, the school psychologist, and school psychological delivery programs to add to their repertoire of "traditional" services (Franklin & Duley, 1991). School psychological delivery programs that are predicated on situations such as refer-and-test models of service delivery, as school psychologists as gatekeepers for special education, as a search for pathology, or as a commitment to reactive versus preventive services and that perpetuate a "static" approach to delivery may find their future survival questionable. It is imperative that school psychologists make choices about matching professional services with the needs of the children and youth we serve and "enhance the likelihood of effective intervention" (Reschly & Grimes, 1990, p. 425). Oakland (1986) suggested that school psychologists work to ensure their services are cost-effective, have community support, and are beneficial beyond what occurs without school psychological services.

This updated chapter provides direction for school psychologists or individuals responsible for establishing or redesigning school psychological services delivery programs. It will include (a) a review of programs that work, (b) organizational considerations, (c) program administration and supervision, (d) comprehensive service delivery, and (e) considerations for the future.

BASIC CONSIDERATIONS

The National Association of School Psychologists (NASP) *Standards for the Provision of School Psychological Services* (National Association of School Psychologists, 1997b) provides the position of the Association "regarding the delivery of appropriate and comprehensive school psychological services." Individuals who are establishing or modifying existing school psychological services should possess a thorough working knowledge of these NASP *Standards*.

To successfully establish or modify a school psychological service delivery program, the school psychologist may benefit from sensitization to programs that work. What follows is a review of six award-winning innovative school psychology delivery programs, although there exist numerous other exceptional school psychology programs.

Beginning in 1982, Division 16 (School Psychology) of the American Psychological Association (APA) and NASP initiated an award to recognize exemplary school psychological service units (Telzrow, 1989). "The award represents a positive public citation for excellence in providing comprehensive psychological services in the school" (Telzrow, 1989, p. 59) and recognizes a psychology services unit that is "exemplary in the range and quality of services offered in the schools" (Division Spotlight, 1988). Recipients of the APA Division 16–NASP Award for Excellence have included Memphis (Tennessee) City Schools Mental Health Center (1982), Gwinnett County Schools Psychological Services (Lawrence, Georgia) (1985), Amphitheater Unified School District School Psychology Department (Tucson, Arizona) (1987), Broward County Schools Psychological Services and Section 504 Support Services (Florida) (1990), Cherry Creek School District Mental Health Team (Englewood, Colorado) (1990), and Cypress-Fairbanks Independent School District Psychological Services (Houston, Texas) (1990) (Telzrow, 1989; L. W. Roosa, personal communication, May 24, 1993). The Award of Excellence does not appear to have been bestowed since the 1990 recognitions (J. A. Cummings, personal communication, February 20, 2000; R. O'Donnell, personal communication, February 23, 2000). A description of each service unit follows.

MEMPHIS CITY SCHOOLS MENTAL HEALTH CENTER

The Memphis City Schools Mental Health Center (MCSMHC) is a service unit to the Memphis City Schools as well as an incorporated not-for-profit mental health center (Paavola, Hannah, & Nichol, 1989). The unit has been led by the director, who is a licensed psychologist with competencies in school psychology. The director has answered to the same associate superintendent as has special education, guidance, and research (Paavola et al., 1989). The MCSMHC has required each staff member to obtain a minimum of 50 staff development hours each year. The MCSMHC has provided mental health services that have included parent/teacher consultation, prevention activities, individual, family and group counseling, and psychological assessment (Nichol, 1993). Currently the MCSMHC provides services for 116,000 students and employs 48 school psychologists. Recently, the Memphis School District adopted an experimental program of fully coordinated support services using School Coordinating Teams articulated by Howard Adelman of the University of California-Los Angeles (Portner, 2000). The district established nine area teams, each headed by a school psychologist (J. Chapman, personal communication, May 2, 2000). The school psychologists support the new system because it de-emphasizes the most bureaucratic portions of their jobs. Approximately 60% of their time had been previously dedicated to student assessments. The new system will employ behavioral specialists to conduct student evaluations, allowing the school psychologists to provide more direct service and intervention to students, behavior modification, anger management, and individual counseling (Portner, 2000).

GWINNETT COUNTY SCHOOL PSYCHOLOGICAL SERVICES

Bush et al. (1989) reported that Gwinnett County in Lawrence, Georgia, has experienced tremendous growth in their student population without a concomitant increase in psychological services staff. Historically, the Gwinnett County School Psychological Services program has been responsible for assessment of students for possible eligibility for special education programs. This diagnostic model of service delivery was found to be "inadequate" owing to the increasingly diversified population. Following a needs assessment, the program formulated a more comprehensive model of services which combined traditional assessment functions with consultation activities. The mission of the program is to provide comprehensive psychological service. The program utilizes a school-based model of consultation proposed by Gutkin and Curtis (1982) with emphasis on collaborative problem solving and the use of student study teams (SST). The manual describing procedures for the SST was revised in 1997 and distributed to all schools. The Gwinnett County program is directed by a licensed/certified professional psychologist and uses a comprehensive evaluation process for psychologists that involves direct observation, analysis of reports, and a summative conference (D. Carter, personal communication, March 26, 2000) . Bush et al. (1989) reported that the program has established a goal to include research and publication. Also, by more effectively managing the assessments and focusing on prevention, the perceived role of the psychologists has changed from gate keeper of special education to that of child advocate with expertise in many areas.

AMPHITHEATER SCHOOL DISTRICT SCHOOL PSYCHOLOGY DEPARTMENT

The Amphitheater School District in Tucson, Arizona has a diverse population of 17,000 students and employs 14 school psychologists. The School Psychology Department head is a certified professional school psychologist and is licensed by the State Board of Psychologist Examiners, provides school psychological services to a district school, and reports to the Executive Director of Student Services. The program adheres to a model of behavioral consultation based upon the work of Bergan (1977). If initial consultation is not successful, or more formal intervention appears warranted, a SST generates alternative intervention strategies. The primary function of the school psychologist is advocacy for the student seeking solutions in the least restrictive setting (Franklin & Duley, 1991). The SST is an additional creative and dynamic problem-solving process using a multidisciplinary team approach. Each psychologist participates in research activities as well as the dissemination of applied research. The Amphitheater School Psychology Department through the use of a consultative model has utilized a growing research base across a number of fields of psychology to address concerns of students in an educational setting. The use of this model has led to a decrease in per capita referrals paired with an increase in student population. Recently a pilot project was implemented using Referral Question Consultation, an empirically based, generic problem-solving model (Batsche & Knoff, 1995), with a population of 1200 elementary students. This led to a further dramatic decrease in the number of students formally considered for special education eligibility. Through the commitment to provide systematic pre-intervention activities the school psychology staff has been better able to provide increased levels of behavioral consultation, direct service, in-service, and related efforts.

BROWARD COUNTY SCHOOLS PSYCHOLOGICAL SERVICES AND SECTION 504 SUPPORT SERVICES

The Broward County School District in Ft. Lauderdale, Florida, is the nation's fifth largest school system and serves a diverse population of more than 250,000 students and employs approximately 110 school psychologists (L. W. Roosa, personal communication, May 18, 2000). Psychological Services is a department within Student Support and Exceptional Student Education Services, which is a component of the Division of Instruction and Program Services. The director, who is an experienced school psychologist, administers the program and is responsible for the programmatic aspects of the services. The direct supervision of school psychologists is provided by Area Coordinators of Student Services, who are experienced school psychologists or social workers. The Psychological Service Department provides a comprehensive range of prevention and consultation activities. School psychologists participate on school-based child study or intervention assistance teams. Collaborative problem-solving consultation activities are available to teachers, principals, and parents. They also provide support to staff members and parents with regard to meeting the requirements of Section 504, participation in violence prevention initiatives, use of a computer database to monitor assessment cases, and delivery of ongoing professional development activities. The size of the department and the staff selection procedures provide for a diverse staff of school psychologists with expertise in low incidence handicaps (e.g., autism and traumatic brain injury) and bilingual evaluations. Bilingual psychologists have participated in the development of informal academic assessment instruments in both Creole and Spanish and have established training programs regarding issues related to second-language acquisition.

CHERRY CREEK SCHOOL DISTRICT MENTAL HEALTH TEAM

The Cherry Creek Schools Mental Health Team (CCMHT) consists of approximately 80 psychologists and social workers who serve a population of 40,000 students in a suburban area near Denver, Colorado (C. L. Lines, personal communication, May 30, 2000). The CCMHT pairs a psychologist and a social worker in most buildings as a mental health team. This team determines the needs of an individual school and tailors services to these identified needs. The CCMHT utilizes a comprehensive community approach to meet the needs of the individuals and systems it services and is committed to a preventive and early intervention model. The CCMHT is supervised by a school psychologist who also serves as the Director of Special Education and reports to the Executive Director of Student Achievement Services. Daily practice issues are overseen by the Facilitator of the Mental Health Team, who is a school psychologist. New staff receives mentoring and small group support. The CCMHT is actively involved in a safe schools district-wide initiative. The Team demonstrates a continued commitment to the training and supervision of future school psychologist practitioners and social workers. They offer a unique re-specialization program for clinical psychologists moving into school psychology. The CCMHT offers seminars and a group supervision model for school psychology interns and practicum students completing placements in the district. The CCMHT also demonstrates a strong commitment to the professional growth of its team members through monthly inservice trainings, peer consultation groups, and clinical supervision for state licensing, which foster individual and professional growth.

CYPRESS-FAIRBANKS INDEPENDENT SCHOOL DISTRICT DEPARTMENT OF PSYCHOLOGICAL SERVICES

The Cypress-Fairbanks Independent School District is located in a rapidly growing suburban area of Houston, Texas. It has grown from a student population of 7,000 in 1968 to 62,300 in 2000. The Department of Psychological Services consists of 17 psychologists and six interns in an APA-accredited training program. The Director of Psychological Services reports to the Assistant Superintendent of Student Services. The psychologists and interns work with the district's 60 educational diagnosticians who manage special education students and complete all psychological evaluations. When appropriate the psychological services staff completes the emotional and personality components of evaluations. The Department's involvement throughout the district has significantly expanded in response to the behavioral and emotional needs of the district's population. The Department's mandate is to "provide quality, broadly based psychological services to the entire school district through a comprehensive psychological service delivery system." Four main goals have been delineated to achieve this task: (a) encouraging programs and providing services that result in the prevention of mental health and educational difficulties; (b) emphasizing indirect services to large populations of students at risk and their families; (c) providing direct services to small targeted groups of students who are determined to be in most extreme risk of school failure due to emotional/behavioral factors, to the families of these students, and to staff who are responsible for their education; and (d) coordinating with and complimenting community mental health and educational systems. The staff demonstrates a commitment to continuing professional development through participation in the intern training program as site supervisors, weekly training colloquiums, and topic study groups. The psychologists are also encouraged to develop areas of professional expertise and present at professional meetings, workshops, and district inservices (K. A. Young, personal communication, April 25, 2000).

The innovative school psychological delivery systems appear to possess in aggregate the following characteristics:

1. Highly qualified generalist/specialist practitioners and a wide range of expertise within each department.
2. Delivery of expanded and comprehensive school psychological services to meet the needs of *all* students.
3. A commitment to pre-referral intervention/prevention activities.
4. The use of school-based collaborative consultation.
5. Linking assessment to instructional intervention rather than classification alone.
6. Articulating departmental successes.
7. Accountability through efficacy data.
8. Malleability and adaptability to ever changing demands.
9. Relevant continuing professional development.
10. Departmental autonomy and clinical supervision and evaluation by a school psychologist.
11. Involvement as consumers and conductors of research.
12. A commitment to the training of future school psychologist practitioners.

BEST PRACTICES

There is no unitary "ideal" delivery system of school psychological services. A best practices model requires careful consideration of numerous variables. This section reviews organizational considerations, program administration and supervision, and 10 basic components of a comprehensive continuum of service delivery for a successful school psychology program.

Organizational Considerations

Placement of the school psychology delivery program within a school district's organization pattern (Talley, 1990) is seen as a critical issue for consideration. Within district models include school psychology as a separate program, within special education services, within special education, and building based. School psychology as a separate department allows for greater professional autonomy and visibility to facilitate the delivery of comprehensive school psychological services. This model allows for practice less encumbered by traditional association with special education. The director may provide both administrative and clinical supervision and often reports to an assistant or associate superintendent. In another model of school psychology, service delivery staff reports to a director of student services who may or may not be a school psychologist. Some independence from special education may be available. However, there is seldom appropriate school psychology leadership, administration, or appropriate clinical supervision of practice. A third model is the school psychology program subsumed within the special education department. In some districts, school psychologists are chosen to direct the school psychology program, but often non-psychologists are in this supervisory role. Problems that might arise from the choice of a non-psychologist director can include a lack of knowledge of practice guidelines, professional standards and ethics, and the comprehensive nature of school psychological services that can be provided. Staunch advocacy for expanded school psychological services may also be absent. The fourth model of building-based school psychology provides for the assignment of a school psychologist to one school or based in one school or several schools. Supervision and evaluation of practice is provided by the building principal. In this model school psychologists generally lack appropriate clinical supervision and may experience a sense of isolation from other school psychologists. Talley (1990) outlined a fifth model described as regional service delivery that is often found in rural school districts where school psychologists are employed by a regional service center or cooperative.

Program Administration and Supervision

The provision of appropriate supervision of school psychologists is required by professional associations (American Psychological Association, 1981; National Association of School Psychologists, 1997b), desired by practitioners (Zins, Murphy, & Wess, 1989), and is an integral component to the success of a school psychology delivery program. NASP has proposed that supervision be made available to all practicing school psychologists "to an extent sufficient to ensure the provision of effective and accountable services" (National Association of School Psychologists, 1997b, p. 684). A ratio of one supervisor for every 10 school psychologists is suggested by NASP with an equivalent ratio being maintained for part-time supervisors and that school psychologists receive one hour per week of face-to-face supervision during the first 3 years of full-time employment (National Association of School Psychologists, 1997b). Following the first 3 years all school psychologists are to continue in supervision and/or peer review (National Association of School Psychologists, 1997b). A supervising school psychologist is defined by NASP as a professional psychologist who has been designated by an employing agency as an administrator responsible for school psychological services in the agency and has met credentialing requirements (National Association of School Psychologists, 1997b). Coursework or other training in the supervision of school personnel is seen as desirable (National Association of School Psychologists, 1997b) and needed (Ross & Goh, 1993).

APA suggests that supervision be provided by a doctoral school psychologist at a ratio of one supervisor per 15 full-time school psychology personnel, that all non-doctoral school psychologists should be supervised, and that all school psychology services staff should receive face-to-face supervision (American Psychological Association, 1981; Talley, 1990).

Although one might assume that these supervisory standards would be commonly followed by most employers, it is suggested that such a commitment to supervision continues to be the exception rather than the rule. Zins et al. (1989) have reported that less than one in four school psychologists actually received clinical supervision. Zins et al. (1989) reported that clinical supervision is often provided by individuals whose terminal degree was not in school psychology and fewer than 50% of supervision met NASP or APA professional practice standards.

The supervisor should be responsible for providing evaluation of the school psychologist practitioner using data pertaining to their personal effectiveness, as well as data pertaining to the effectiveness of the department as a whole. This evaluation should be both formative and summative. Such evaluation can assist the school psychologist practitioner in determining his or her current developmental levels and professional strengths and weaknesses (Knoff, 1986). It is also suggested the supervisor must assess the effectiveness of the service delivery by the department and determine the match with the needs of the local constituency. The nature, magnitude, and frequency of problematic situations within the schools seem to be changing at a rapid pace in most communities. Therefore, it continues to be the school psychologist practitioner's responsibility to assess these problematic situations and provide timely and appropriate intervention. The nature and breadth of these problems make it at times difficult, if not impossible, to possess every technical and practical skill to deal with every facet of practice demanded in the field (Knoff, 1986). It becomes the responsibility of the supervisor to match the practitioner's relative strength areas with the identified needs of the constituency. It is important for the supervisor of school psychologists to provide liaison activities with other professionals in related fields. Federal and state rules, regulations, and standards to which school psychologists must adhere may be different from those rules applied to practitioners in related areas. It may therefore be necessary for the supervisor to define these differences to appropriate agencies or private practitioners to facilitate the continued delivery of quality school psychological services.

It is believed that the supervisor of school psychologists is most effective when he or she provides supervision while simultaneously understanding those being supervised by providing comprehensive school psychological services. It is also believed that the supervisor of school psychologists must always be seen as striving for individual and departmental excellence while always keeping one foot in the camp of the school psychologist practitioner. Without such a frame of reference one's supervisory effectiveness can be greatly diminished (Franklin, 1989). It is suggested that any best practices model for school psychology services delivery would require adherence to the provision of appropriate school psychology practitioner supervision.

In the establishment or modification of a delivery program it is necessary that we recruit qualified practitioners. Although most school psychologist practitioners received training as generalists (Fagan, 1990b), there may be a need to recruit individuals within specialty training to include early childhood, neuropsychology, curriculum-based assessment, and bilingual skills. Prior to hiring a new school psychologist practitioner it may be useful for the department to assess its present needs and establish a profile for the replacement psychologist. The supply and demand gap for school psychologist practitioners appears to continue to be problematic given the "graying" of the profession (Connolly & Reschly, 1990; Curtis, Hunley, Walker, & Baker, 1999). Ongoing networking with state professional organizations and graduate training programs, the maintenance of competitive salary schedules, and a work environment that allows for school psychologists to use their diverse skills can improve both the quantity and quality of applicant pools of school psychologists. As individuals in training programs seek higher levels of required training and employment in more diverse practice settings (Fagan, 1990a), it is suggested that shortages of school psychologist practitioners will continue in the future.

The school psychology department should facilitate the establishment of short-term and long-range departmental direction through the use of strategic planning to include a needs assessment, a mission statement, and specific departmental goals and objectives with measurable criteria (Franklin & Wasserman, 1992; Talley, 1995). This process allows the department to know where it needs to go, how it plans to get there, and when it has arrived.

NASP (National Association of School Psychologists, 1997b) provides guidelines suggesting a ratio of at least one full-time school psychologist for each 1,000 children and youth served. NASP recognizes that the ratio may vary based upon the needs of children served, the type of program served, resources available, distance between schools, and other unique characteristics (National Association of School Psychologists, 1997b). School psychology programs should advocate at the state and local levels for practitioner-to-student ratios that allow for the delivery of comprehensive school psychological services.

In light of higher caseloads, shortages of funding in public education to provide appropriate compensation or appropriate salary increases, and increasing expectations upon school psychologist practitioners (Fagan, 1990a), retaining qualified practitioners will continue to be a demanding issue (Curtis et al., 1999). Issues surrounding burnout of school psychologist practitioners should also be given consideration (Huebner, 1992; Thomas, 1995).

Comprehensive Continuum of Service Delivery

It is suggested that all school psychological practice should be in full accordance with NASP *Principles for Professional Ethics* (National Association of School Psychologists, 1997a) and *Standards for the Provision of School Psychological Services* (National Association of School Psychologists, 1997b). One purpose of the *Standards* is to help ensure "the provision of a comprehensive continuum of services" by school psychologists to all students (National Association of School Psychologists, 1997b, p. 683).

CONSULTATION AND PRE-REFERRAL INTERVENTION

It appears that central to most successful school psychology delivery programs exists the use of problem solving behavioral consultation with parents, teachers, and students themselves. "The school psychologist usually does not personally provide the intervention," but provides guidance for those that do so (National Association of School Psychologists, 1997b). Behavioral consultation generally incorporates a four-stage process in which problem identification, problem analysis, plan implementation, and plan evaluation are effected to address student difficulties. Central to the concept of the consultation model is the collaborative interaction between the psychologist and the teacher to address student needs (Franklin & Duley, 1991). It is then hoped that these skills generalize across other cases within the educational setting. Therefore, the skills of the psychologist may be used more effectively as a mental health practitioner and team leader as opposed to a more reactive, psychometrically based practitioner (Franklin & Duley, 1991). Intervention assistance programs, first described by Chalfant, Pysh, and Moultrie (1979), provide an alternate consultation framework for the delivery of school psychological services (Ross, 1995). Batsche (1991) reported that consultation/intervention services can reduce special education placements by as much as 50% without adversely affecting the progress of individual students.

ASSESSMENT

Another significant component of school psychology service delivery may be psychological and psychoeducational assessment. School psychologist practitioners must employ non-biased multi-faceted comprehensive psychological and psychoeducational assessment of children and youth as appropriate according to current best practices (National Association of School Psychologists, 1997b). School psychologists should utilize a variety of observational, behavioral evaluation, interview, as well as the traditional use of both normative and criterion referenced instrumentation. All assessment should be linked to instructional intervention. Reschly (1988) cautioned that assessment for classification will be replaced by assessment for the expressed purpose of developing intervention to be implemented in the classroom. Direct assessment techniques such as curriculum-based assessment (CBA) are seen as important competencies for school psychologists (Reschly, 1988). Reschly and Ysseldyke (1995) suggested that as practitioners we are "*pushed* by problems in the current system to consider alternatives to conventional referral, assessment, classification, and placement practices" (p. 23).

DIRECT SERVICES

Direct services to students is traditionally seen "as techniques supplied in a face-to-face situation (e.g. individual/group counseling, classroom-based interventions, etc.) designed to enhance the mental health, behavior, personality, social competency, academic, or educational status of the student/client, or prevent difficulties in these areas" (National Association of

School Psychologists, 1997b, p. 689). Both individual and group counseling activities would fall within this heading. Recently, school psychologists are dealing with crisis intervention situations that cause the "interrupted day." Often the school psychologist is the front-line mental health professional within schools and is therefore called upon to provide intervention services on an as-needed basis. This creates friction between crisis needs and the demands of the existing caseload and mandated timelines.

PREVENTION

Primary and secondary prevention, rather than tertiary prevention (treatment), should also be seen at the heart of a successful school psychology delivery program. The use of primary prevention seeks to change the incidence of new referrals by intervening proactively before a disorder occurs (Hightower, Johnson, & Haffey, 1995). For example, competencies may be increased through education or environments may be modified to reduce or counteract harmful circumstances. Primary prevention efforts call for proactive, pre-emptive efforts to increase resiliency rather than attempting to reduce existing problems (Hightower et al., 1995). Secondary prevention is generally seen as early identification and intervention before problems become severe. This paradigm shift from treatment to prevention (Hightower et al., 1995) is seen as a critical component for practicing school psychologists who desire to provide a successful school psychology delivery program. The existing need for more school psychology services and the continuing shortage of school psychologist practitioners suggest the need for adoption of effective prevention programs (Hightower et al., 1995). School psychologists must continue to place their energy on the front end of the continuum with broad based prevention rather than on the back end with expensive reactive crisis intervention.

RESEARCH

NASP suggests that school psychologists "design, conduct, report, and utilize the results of research of a psychological and educational nature" (National Association of School Psychologists, 1997b, p. 690). Keith (1995) defined research as "activities designed to produce new scientific knowledge or to use the knowledge to improve school psychological practice" (p. 135). Keith (1995) stated the need for school psychologists to be competent consumers of research, to act as distributors of research, and to conduct research. For those conducting research, the use of quasi-experimental research, single case designs, reversal designs, and multiple baseline designs hold promise (Keith, 1988). It is suggested that school psychologists should be involved in one or more levels of research to bring about a quality school psychology delivery program. Stoner and Green (1992) suggested that 100% of a school psychologist's time should be involved in doing research in that practice and research should become one and the same.

Kratochwill, Schnaps, and Bissell (1985) described four general types of research in school psychology including historical research, descriptive research, passive-observational methods, and experimental research. For school psychologists who have not been actively involved in research or in the use of research findings, Franklin and Sabers (1987) have suggested that active participation in research is almost certain to be accompanied by additional learning and professional development. Reading and discussing the literature during the planning stages of a study are likely to produce a better informed practitioner. The credibility one gains for self, the service unit, and the district should not be minimized. In this day of static or decreasing budgets for school psychology it becomes more important for the practicing school psychologist to maintain high visibility and become more valued. The school psychologist as researcher can become more valuable both as disseminator of research findings and as one who can investigate questions needing answers.

Anything that is worth doing within a school setting warrants consideration for sharing with fellow professionals. This "sharing" may take the form of oral presentations to district staff, presentations to local, state, or national professional groups, articles in state and regional publications, book chapters, or national refereed journals. "If it is worth doing, it is worth telling your fellow psychologists about it" (Franklin & Sabers, 1987, p.8). By way of example, during routine assessment, Franklin (1983) observed consistently lower scores on a subtest of a commonly utilized individually administered reading achievement test. This concern led to a decision to study this subtest. Issues surrounding design, method, and analysis were resolved through consultation with colleagues at a local university. This study led to an article based on data gathered as part of routine re-evaluations of a relatively small number of students. The reading subtest was subsequently modified by the instrument's author. This revision led Franklin, Fullilove, and Sabers (1985) to evaluate the author's modifications. Again, this research was accomplished as part of a routine pre-post testing battery for development of individual education plans, and incorporated a school psychology practicum student.

More recently a group of school psychologists and a doctoral intern observed disparity in standard scores for writing subtests of an individually administered achievement battery (Franklin, McHale, Kapp, & Sabers, 1999). After consultation with a colleague at a local university, existing data were analyzed and the results supported the observations of the practitioners. These findings led to a modification of special education eligibility decisions by multidisciplinary teams for students with written language deficits.

LIAISON AND COORDINATION

NASP advocates that school psychologists establish and maintain relationships with other professionals who provide services to children and families and "collaborate with these professionals in prevention, assessment, and intervention efforts as necessary" (National Association of School Psychologists, 1997b, p. 688). School psychologists can assist in coordinating the services of mental health providers from other agencies to provide a continuum of service for students (National Association of School Psychologists, 1997b). It is suggested that these liaison and coordinating roles will become increasingly important (Sheridan, 1995) as children and families lack access to private health insurance or managed health care programs.

SUPERVISION, TRAINING, AND MENTORSHIP

School psychology departments can contribute substantially to training and development of new school psychologists. Introductory school psychology students, practicum students, and internship students need to observe the existing expertise of school psychology practitioners who need to keep current with the theory and research that students bring with them. It is also important for practitioners to work with university trainers in the area of supervision of students participating in school psychology practica and internships (Conoley & Bahns, 1995). These activities help ensure the existence of a future pool of quality school psychologist practitioners (Franklin, 1995). It is suggested that new practitioners within school districts should be assigned mentors to assist in shepherding them into the politics and nuances of the school district and assisting with professional issues.

CONTINUING PROFESSIONAL DEVELOPMENT

There is a constant need for information that can, in part, be met through the provision of continuing education and professional training for the school psychologist practitioner. This may be accomplished through the dissemination of information between professionals within the department, contracting with experts for inservice, and through the participation of practitioners in conferences and workshops (Franklin, 1989). McKee, Witt, Elliott, Pardue, and Judycki (1987) suggested that talking to colleagues, exploring local needs, and requesting and sharing specific information may be as useful in obtaining information as more expensive solutions such as employing outside consultants, attending workshops, and using professional development materials. It may be necessary to advocate for continuing professional education and professional training activities for school psychologist practitioners.

"The practice of school psychology has and will continue to undergo significant changes as new knowledge and technological advances are introduced" (National Association of School Psychologists, 1997b, pp. 690–691). It will therefore be necessary for the school psychologist practitioner to remain knowledgeable regarding these changes. School psychology service programs that require or encourage school psychologist practitioners to acquire and maintain credentialing by the National School Psychology Certification System (National Association of School Psychologists, 1988) assist in the continued training and honing of existing skills of its practitioners. Continuing training and the reinforcement of existing skills are critical to the maintenance of quality school psychology delivery programs (Franklin, 1989, 1995).

ACCOUNTABILITY

Accountability of the service delivery program is an important component as well (National Association of School Psychologists, 1997b). Zins (1984, p. 58) defined accountability as an

> evaluative effort designed to gather systematically information relevant to the performance assessment of school psychologists. It enables them to demonstrate the effectiveness of their services to others, and it provides an evaluation of how well they have met their performance objectives. It is concerned with both quantitative and qualitative aspects of practice and addresses both individuals and groups. It is particularly useful in improving service delivery and enhancing professional development.

Batsche (1991) suggested that school psychologists collect data regarding efficacy related to costs, consumer satisfaction, as well as the effectiveness of service delivery. "If you are a supervisor or a school psychologist in a district hard hit by financial difficulties, ask yourself whether or not you are providing information that convinces superintendents and boards of education of the worth of school psychological services" (Batsche, 1991, p.2). In the Minneapolis, Minnesota, Psychological Services Program, accountability data brought about modifications in school psychology practice as a function of the outcome of the accountability system (Canter, 1991). As individual practitioners and as a profession we cannot ignore the need to regularly evaluate our services (Zins, 1990). Providing accountability data must become a routine component of school psychological services.

HIGH VISIBILITY

It is important to report the accomplishments of the school psychology department to the teachers, administrators, governing board members, and constituents of the district (Franklin, 1989). Maintaining high visibility for a successful school psychology delivery program can facilitate future support for additional staff positions, the provision of continuing education and professional training, and the delivery of "non-traditional" practice opportunities for the school psychologist (Franklin, 1989). Public image must be seen as a major factor in the role of the school psychologist and the services that are provided (Kelly, 1990, 1995). The following quote, attributed to the late Congressman Adam Clayton Powell, that "you will never hear any music if you don't blow your own horn" (K. P. Dwyer, personal communication, March 8, 1994) should be seriously considered by school psychologist practitioners.

Future Considerations

Hutton, Dubes, and Muir (1992) reported that school psychologists spend 40–60% of their time in assessment activities. Will (1988) suggests that the traditional role of school psychologists as gate keepers for the entry to special education and re-entry to regular education program needs to shift from reactive to proactive in which learning and instructional problems are presented. "This shift will require greater emphasis on instructional variables that include the curriculum, task features, teaching functions, and instructionally based assessment procedures" (Will, 1988, p. 478).

Outsourcing caused consternation for the Amphitheater School District School Psychology Department. An advisory committee, created by the Governing Board to investigate possible budget reductions, determined that disbanding the Department and outsourcing all assessment services required by federal and state mandates would reduce expenditures by a seemingly significant, and tempting, factor. However, a carefully documented study that established not only the engaged time for assessment but also other activities required by statute recalculated the cost of outsourcing given actual contractual arrangements with local and regional practitioners and halved projected reductions. The Department established in a presentation to the Governing Board that outsourcing would prove far more costly in the long run although initial savings may be realized. Without continued utilization of a pre-intervention consultation model, requests for assessment would skyrocket, as had already occurred across other disciplines that had attempted contracted services. Further, the Department advocated that the completion of merely mandated assessments did not provide a coordinated and organized comprehensive continuum of services advocated by NASP (National Association of School Psychologists, 1997b) and as a delivery model (certainly far from best practice) would likely increase costly due process hearings and litigation. To date, that advocacy has been successful and outsourcing has not been attempted.

Reschly (1988, p. 472) believed that the "character of school psychology at the dawn of the twenty-first century will be markedly influenced by how we manage the challenge of special education reform and the necessary revolution." Kavaleski (1988, p. 483) stated that school psychologists have a unique opportunity to alter contingencies that influence their own practice. Accepting this challenge can lead to the establishment of school psychology in a reformed system. Ignoring the opportunity will lead at best to business as usual and at most to the demise of a discipline.

As school psychological service delivery programs continue to experience static or declining budgets, five issues will demand scrutiny:

1. Continuing efforts to overcome resistance by school psychologists, teachers, and administrators as practitioner roles change from refer-and-test to pre-referral intervention and prevention.
2. The need to preserve school-based school psychologist positions (National Association of School Psychologists, 1993) and avoid "outsourcing" (National Association of School Psychologists, 1999).
3. The provision of efficacy data for school psychological services (Batsche, 1991). NASP urges school psychologists to empirically evaluate the cost effectiveness of current models of service and to establish on-going program evaluation (National Association of School Psychologists, 1999).
4. Attracting and retaining qualified school psychologist practitioners.
5. The hiring and utilization of individuals with less comprehensive training as educational diagnosticians or psychometrists under the direction of school psychology.

SUMMARY

As school psychological delivery programs are asked to constantly re-examine their roles, functions, and skills, they must resist the temptation to remain locked into models of delivery that are "comfortable." There exists no single best way to deliver effective school psychological services. However, the NASP *Standards for the Provision of School Psychological Services* (National Association of School Psychologists, 1997b) provides exceptional direction for those who are planning or modifying existing school psychology delivery programs. This chapter reviewed organizational considerations, program administration and supervision, and 10 components of a comprehensive continuum of service delivery for a successful school psychology program. A review of six innovative award-winning school psychology programs indicates that they appear to possess in aggregate a series of characteristics. These characteristics included (a) highly qualified practitioners and a wide range of expertise within each department, (b) the delivery of comprehensive services to *all* students, (c) a commitment to pre-referral intervention/prevention activities, (d) the use of school-based collaborative consultation and pre-referral intervention, (e) linking assessment to intervention, (f) articulating departmental successes, (g) accountability through efficacy data, (h) malleability and adaptability to ever changing demands, (i) continuing professional development, (j) departmental autonomy and supervision by a school psychologist, (k) involvement in research, and (l) a commitment to training future school psychologist practitioners.

It is hoped that school psychology services delivery programs that are fixed on narrow roles and functions for school psychologist practitioners will continue to strive to move from what is "real" to what may be seen as more "ideal" (Stewart, 1986).

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This chapter provides distinctions between administrative and clinical supervision, organizational models for the delivery of school psychological services, and guidelines for school psychology leaders who are charged with translating theory into real-world school psychological services.

11 Best Practices in Evaluating Psychoeducational Services Based on Student Outcome Data

Kimberly A. Gibbons
St. Croix River Education District
Michelle M. Shinn
University of Oregon

OVERVIEW

It is no secret that significant changes have occurred in the past decade with respect to how school psychological services are delivered. The role of the school psychologist has, and still is, evolving from that of gatekeeper to that of a scientist-practitioner and/or problem-solver (Deno, 1995; Reschly & Ysseldyke, 1995). A literature review of just the past decade will produce countless numbers of documents calling for, and describing changes, in the *services* provided by the school psychologist, including this book and the previous edition (Thomas & Grimes, 1995). These same publications also express the need for school psychologists to *evaluate the effectiveness of their services*, including documentation of improved student outcomes as the criterion for success (Reschly, 1995).

However, even with a continued and almost relentless emphasis on accountability in education and school psychology, there is *limited* information about the use of student outcome data to evaluate the effectiveness of the services provided by school psychologists. Of the current methods being used to evaluate effectiveness of services provided, outcome data appear to be collected the *least*. In the most recent survey of school psychology accountability practices, Fairchild and Zins (1992) found that of the respondents who reported collecting some type of accountability data, over 80% reported using a tabulation method, over one-half reported using a time analysis, and one-third reported the use of rating scales. Fewer than 10% of respondents reported writing goal statements or collecting any measures of behavioral change. Even with the increased emphasis on accountability, Fairchild and Zins (1992) found that these data had not changed since the original survey was completed in 1984 (Zins & Fairchild, 1986). There were no statistically significant changes in the percent of respondents from the 1991 or 1984 survey engaging in any type of accountability activities. Unfortunately, this survey is almost a decade old. One would be hard pressed to find current published evidence documenting the effectiveness of psychological and/or educational services using student outcome data.

Therefore, following a brief discussion of the most common methods used to evaluate school psychological services and limitations associated with these methods, a majority of this chapter will be devoted to providing practitioners with viable methods of using student outcome data to improve psychoeducational services to students with and without disabilities.

Current Methods of Evaluating Effectiveness

Tabulation, time analyses, and surveys (Canter, 1991; Fairchild & Zins, 1992; Fairchild & Seeley, 1996; Keith, Brown, & Oberman, 1992; Tomlinson, 1973) have been the most widely used methods to evaluate the effectiveness of psychoeducational services. Tabulation and time analyses are collected by having a school psychologist keep a log describing the types of services they provide and the amount of time spent in certain activities (Canter, 1991; Fairchild & Zins, 1992). Time analyses allow practitioners to monitor the amount of time they spend by activity and examine any changes in service delivery that occur either as a result of personal goals or departmental goals (Canter, 1991). However, it could be argued that such methods do not measure effectiveness at all.

Surveys also are commonly used by school psychologists to collect information about the perceived effectiveness of their services and ratings of personal characteristics and professional skills. In most cases, surveys are developed by the school psychologist to solicit feedback regarding topics such as interpersonal skills, ability to communicate, timeliness and follow through, availability for consultation, work habits, and the effectiveness of the recommendations they provide to teachers (Fairchild & Seeley, 1996; Keith, Brown, & Oberman, 1992; Tomlinson, 1973). Surveys typically include a series of questions, either open-ended or with a rating scale, completed by teachers, students, administrators, and parents.

Beyond time analyses and surveys, school psychologists also evaluate the effectiveness of their services by collecting outcome data. The most common outcome is that of student improvement over time as a result of involvement by a school psychologist. More formally, outcome data are intended to provide information about the behavioral changes that occur as a result of the services provided by the school psychologist (Fairchild & Zins, 1992; Tomlinson, 1973). Measurable increases in grades, acquisition of particular skills, and increases in reading achievement (Canter, 1991) have been used to demonstrate the effectiveness of involvement by a school psychologist.

Barriers to Evaluating the Effectiveness of Psychological and Educational Services

Perhaps the biggest barriers to collecting student outcome data to evaluate service effectiveness are the challenges involved in identifying *what* to measure and *methods* of collecting data (Fairchild & Zins, 1992). Almost 43% of the respondents in Fairchild and Zin's 1992 survey reported unfamiliarity with accountability procedures as a significant barrier to collecting any type of accountability data. Identifying what to measure can be overwhelming when we consider the number of different services provided by a school psychologist, including assessment, counseling, and consultation for academic, behavioral, social, and emotional concerns (Fairchild & Seeley, 1996). In addition, the effects of psychoeducational interventions have been considered by some to be global and less tangible than measures of academic performance and therefore less amenable to objective measurement (Tomlinson, 1973). However, the above-mentioned barriers can be overcome.

BEST PRACTICES IN EVALUATING PSYCHOEDUCATIONAL SERVICES

Best practices in evaluating psychoeducational services by using outcome data include the following steps: (a) developing clearly defined goals, (b) determining performance indicators of student performance, (c) describing the relationship between psychoeducational services and goals, (d) focusing on collaboration and teamwork, and (e) evaluating progress toward goals. Each of these steps is described in detail below, and a case study has been included to illustrate implementation of the steps.

Develop Clearly Defined Goals

"We did not find a single case in the literature where student learning increased but had not been a central goal."

— Joyce, Wolf, and Calhoun (1993)

The first step in evaluating psychoeducational services for the district is to develop clearly defined goals that are linked to student outcome data. However, most goals in education are rarely linked to student achievement, seldom challenge the basic elements of practice (McGonagill, 1992), and can be vague and difficult to measure. For exampl , many school districts have as a goal that all children will enter school ready to learn. This goal has many different meanings depending on who is interpreting it. A classroom teacher may interpret it to mean that children will come to school with the prerequisite knowledge and background and experiences to benefit from instruction. The school nurse may believe that it means students are well rested, amply nourished, and up-to-date on all vaccinations. The school psychologist may believe that it means that students are emotionally mature enough to stay on task during instruction and interact appropriately with peers.

Whatever the interpretation, it is paramount that goals are identified in such a manner that the goals are clear and measurable. According to Rosenholtz (1989), clearly specified goals are important for four reasons. First, specific goals help convey a message directly to educators that students are capable of improvement. Second, specific goals provide a basis for rational decision making. Third, specific goals enable teachers to gauge their success and make changes in instruction when progress is not satisfactory. Finally, specific goals promote professional dialogue.

By using the ready-to-learn example cited previously, one clearly defined goal may be that students enter school with a basic knowledge of print (i.e., knowing what and where the beginning and the ending of a book is, understanding the concept of reading left to right, knowing the top and bottom of the page). A goal of this type is objective and easily measured, therefore making it easier to make statements about student improvement based on outcomes.

Determine Performance Indicators of Student Performance

"What gets measured gets done."

—Peters (1987)

Once a goal is clearly defined, a determination needs to be made as to how student performance will be measured. Deno (1986) suggests that five criteria should be met when selecting a performance measure. First, the measure should be a reliable and valid indicator of student achievement or behavior. Second, the measure should be simple, efficient, and of short duration to facilitate frequent administration by teachers. Third, the measure should provide assessment information that helps teachers plan better instruction. Fourth, the measure should be sensitive to the improvement of student achievement and/or behavior over time. Fifth, teachers, parents, and professionals should easily understand both the resulting data and the measurement process. By using performance criteria that meet these criteria will help ensure that goals can be evaluated in a formative manner and that interventions can be implemented when student progress is unsatisfactory.

Traditionally, progress has been measured by using published, norm-referenced tests of achievement. These measures typically are not sensitive to short-term changes in student improvement, making them difficult to use as a formative evaluation tool (Marston, 1989). An alternative to published, norm-referenced tests of achievement is Curriculum-Based Measures (CBM). In basic skill areas, CBM are valid and reliable performance indicators that can be used as a formative progress monitoring tool (Shinn, 1989).

Describe the Relationship Between Psychoeducational Services and Goals

The trend in school psychology service delivery has moved away from assessment for diagnosis and classification of individual students toward a focus of assessment for the purposes of prevention and intervention to provide positive outcomes for all students. This change in service delivery provides a mechanism for school psychologists to assist education and state agencies in restructuring schools in positive ways. For example, school psychologists can indirectly impact student achievement by providing instructional and behavioral consultation, advocating for data-based practices, promoting research-based curricula, and assisting schools in setting up continuous and frequent measurement systems for all students.

However, when school psychologists take on the challenge of prevention and intervention, there should be a direct relationship between their roles and responsibilities and the goals identified by the system (i.e., individual school, district, or cooperative districts). Consequently, to effectively evaluate school psychology services using student outcome data, there must be a clear relationship between the system goals and the role of the school psychologist. To make this relationship clear, school districts should develop job descriptions that clearly state the district goals, roles and responsibilities of the school psychologists, percentage of time allocated for each responsibility, and outcome indicators of success.

When restructuring school psychology service delivery, administrators and teachers need to have input in the process and the definitions of roles and responsibilities. If a school district is committed to reaching its goals by restructuring psychoeducational services, then it is crucial that school administrators support school psychologists in their new roles. Clearly, if school psychologists are to engage in alternative activities, then there has to be an awareness and understanding that they will not spend the majority of their time engaging in more traditional activities. For example, the Minneapolis Public Schools found that by switching to a problem-solving service-delivery model using CBM, school psychologists provided more consultation, more direct intervention services, and spent less time in assessment services primarily to determine eligibility (Canter, 1991). Once school psychology services have been clearly defined, the school principal and the school psychologist should meet with teachers and support staff to outline the service-delivery model.

Focus on Collaboration and Teamwork

"Teams get results."

—Katzenbach & Smith (1993)

Obtaining results depends on the interdependency between collaboration and goals. Though teamwork is fundamental in this scheme, "it is the means, not the end" (Katzenbach & Smith, 1993, p.12). Obviously, school psychology services in isolation may not impact student outcomes in a significant way. Ultimately, it is the interaction between a number of variables that will have the most significant impact on student outcomes. For example, suppose a school district sets a goal that all children will read at grade level by the end of the academic year. Many factors will influence whether this goal will be met. These factors include choice of curriculum, instructional strategies, consultative support to teachers, data-based decision making, and administrative support. Teaching staff will need to examine the reading research and determine the core knowledge and skills students need to learn at each grade level. The district's curriculum committee will need to select a well-designed curriculum that includes the core knowledge and skills students need to learn.

The school psychologist may assist teaching staff in administering screening assessments for the purpose of determining instructional groups. Teachers and support staff are responsible for teaching the curriculum by using well-designed instructional strategies. The school psychologist may assist teachers in setting up a frequent and direct assessment system to monitor student progress. Principals need to allocate common time for teachers to prepare and review student progress with other teachers from their grade level. Finally, the school psychologist may meet with grade-level teams to review student progress and design individual or group interventions when progress is not satisfactory. School psychology services play an important role in determining whether student goals are met, but the key factor is the effectiveness of the "educational team" (Schmoker, 1996).

The previous example illustrates the complex work of teaching and obtaining results. Teaching "cannot be accomplished by even the most knowledgeable individuals working alone" (Little, 1990, p. 520). Evidence for the benefits of effective collaboration are overwhelming. Little (1990) found a strong relationship between the correct kind of collegiality and improvements for both teachers and students. These improvements included remarkable gains in student achievement, higher-quality solutions to problems, the ability to examine and test new ideas, methods, and materials, and an expanded pool of ideas, materials, and methods.

Schools are encouraged to establish collaborative teams at each building and individual grade levels for the sole purpose of reviewing progress toward goals and making adjustments in instruction in response to student data. The key element in collaborative teams is a focus on the end result (i.e., student achievement) and data-based decision making. The combination of goals and teamwork is essential to student performance. School psychologists, along with other building administrators, play a key role in working with teaching and support staff to continually focus on the identified goals and help groups work together in reaching the goal.

Evaluate Progress Toward Goals

"Assessment as a basis for formative evaluation contributes most significantly to problem solution."

— Deno (1995)

Once goals have been identified and a plan for reaching the goals has been developed, evaluation of progress toward goals should be conducted by using frequent and direct measures of student performance. Typically, goals are identified, a plan is developed, and then goals are evaluated at the end of the school year. The problem with this type of evaluation is that ineffective programs are not identified as ineffective until after they have been implemented for some time. The end result for students is that they have had a year of ineffective instruction, widening the gap between their performance and that of their peers. Alternatively, a combination of both formative and summative evaluation should be used to maximize decision making, described below.

FORMATIVE EVALUATION

Formative evaluation involves assessment during ongoing instruction. With a formative evaluation system, effective interventions identified during instruction are maintained, and ineffective interventions may be modified. From a system perspective, resources can be reallocated as needed based on progress toward the overall goal. For example, a school district may set a goal that all first graders will read 60 words per minute by the end of the school year. If data collected in January indicate that the median score is 10 words per minute, then a problem may exist and a program change needs to occur. In order for the goal of 60 words per minute in the spring to be met, students should be reading at least 20 words per minute in January. School psychology and other educational services in the district can be targeted to provide instructional and behavioral consultation to first-grade teachers and students in need of assistance to improve outcomes.

Information collected during the formative evaluation process also provides a mechanism to evaluate the contribution of the school psychologist in meeting the goals set by the education agency. A number of questions (See Table 1) may be asked when data collected during the formative evaluation process indicate that student progress is insufficient. Consideration of these questions will enable changes to be made in the overall service-delivery model as well as in individual student programs.

SUMMATIVE EVALUATION

While formative evaluation takes place during instruction, summative evaluation occurs, for example, at the end of the school year. Summative evaluation should occur at the end of each year to determine if the system goal has been met. If so, then it can be concluded that the service-delivery model was effective and the focus can shift to maintaining the current model and level of psychological services. If goals have not been met, then decisions will need to be made about the overall service-delivery model and the allocation of psychological and other educational services. Many of the questions asked during the formative evaluation process should be re-evaluated as well.

Case Study

To further illustrate how to evaluate psychoeducational services using student outcome data, a case study is presented using data collected from an elementary school in a Midwest state. The format of the case study will follow the "best practices" steps outlined above.

CLEARLY DEFINED GOALS

The school district determined that the basic skill area of reading was a top priority. Students in this state are

Table 1. Useful system-level questions to ask when student progress is insufficient

1. Is the percentage of time allocated to instructional and behavioral consultation sufficient?
2. Are teachers and principals supportive of the school psychologist's change in roles and responsibilities?
3. What are the perceived barriers preventing progress?
4. Are the resources of people, time, and materials flexibly assigned to meet student needs as they change over time?
5. Is more time for interventions or extra instruction available for students who are not meeting the goal?
6. Are curricular programs in place that are empirically validated to produce positive outcomes for students?
7. Is targeted staff development available for regular and special education personnel to acquire skills needed to implement "best practices" for students with learning and adjustment difficulties?

required to take a high-stakes basic skill reading test in grade 8. That is, in order to receive a high school diploma, students must earn a score of at least 80%. Since 1995, this particular district has conducted Benchmark Testing (Shinn, Shinn, Hamilton, & Clark, in press) for all students in the areas of reading, math, and written expression using CBM.

After examining the Benchmark data collected during the 1995–1996 school year, the district was concerned about student progress in the area of reading. Knowing that remediation of reading skills is very difficult, particularly when students reach middle school and above, the district decided to take a proactive approach and focus on improving beginning reading instruction for students in grades K–2 and general reading instruction for students in grades 3–5. The district set criterion scores at each grade level (established through research) that students would meet by the spring of each school year. These goals are summarized in Table 2.

The district believed that student reading performance was an applicable indicator for assessing the effectiveness of school psychology services for a number of reasons. First, it is well documented that when students achieve academic success in school, then other problematic social behaviors are less prevalent. Second, school psychologists can play a key role in working with both regular and special education teachers to improve reading instruction for students. For example, school psychologists can help teachers set ambitious goals for students to help increase their achievement, and they can assist in the design of interventions when progress is not satisfactory. Finally, the current trend in school psychology emphasizes the pivotal role that school psychologists can play in the areas of prevention and intervention to provide positive outcomes for all students. The district believed that using the school psychologist as an instructional consultant in the area of reading would promote their role in prevention and intervention.

DETERMINE PERFORMANCE INDICATORS

The district chose to measure student performance in the basic skill areas by using CBM. In the area of reading, students were given three reading passages from grade-level text and asked to read aloud for 1 minute. The district followed standard CBM administration and scoring methods (Shinn, 1989). The score that was used was the number of words read correctly (WRC) in 1 minute.

Table 2. Goals set by the St. Croix River Education District

Grade	*Goal*	*Performance indicator*
K	By spring of the school year, when presented with a random list of letters, students will name 40 sounds per minute.	Letter sounds/minute
	By spring of the school year, when presented with a word, students will be able to segment phonemes at a rate of 35 per minute.	Phonemic segments/minute
1	By spring of the school year, students will read at a rate of 55 words per minute from first grade level passages.	Words correct/minute
2	By spring of the school year, students will read at a rate of 80 words per minute from second grade level passages.	Words correct/minute
3	By spring of the school year, students will read at a rate of 90 words per minute from third-grade–level passages.	Words correct/minute
4	By spring of the school year, students will read at a rate of 110 words per minute from fourth-grade–level passages.	Words correct/minute
5	By spring of the school year, students will read at a rate of 120 words per minute from fifth-grade–level passages.	Words correct/minute
6	By spring of the school year, students will read at a rate of 135 words per minute from sixth-grade–level passages.	Words correct/minute

DESCRIBE THE RELATIONSHIP BETWEEN PSYCHOEDUCATIONAL SERVICES AND GOALS

The district determined that the most powerful academic services for the most students, using existing resources, would be provided through a flexible model of service delivery. This model included the following four key elements: (a) frequent and continuous measurement of all students, (b) grade-level team meetings, (c) concentrated resources, and (d) flexible grouping. The role of the school psychologist was restructured to include these elements, described in more detail below.

FREQUENT AND CONTINUOUS MEASUREMENT

Frequent and continuous measurement of student progress was the critical element in monitoring progress toward individual student goals and the overall system goal. Rather than wait until the end of the school year to determine if the goals were met, progress was monitored regularly so interventions could be implemented in response to student data. Benchmark Testing (Shinn et al., in press) was conducted with all students three times per year. The purpose of Benchmark Testing was to monitor the progress of each student regularly; to call immediate attention to students having difficulty; to aid communication between teacher, parents, and other professionals; and to provide information on effectiveness of educational programming. The school psychologist was responsible for facilitating the Benchmark Testing in collaboration with education district staff. Specific duties of the school psychologist included arranging (a) who would conduct the testing, (b) training for testers (initial and follow-up), (c) scheduling, (d) logistical issues such as where testing occurred and what equipment was needed, (e) materials for conducting testing, and (f) activities and timelines.

Strategic Monitoring (Shinn et al., in press) was conducted once per month on all students who were at-risk for reading failure so that changes in instruction could be made as soon as possible. More intensive monitoring was conducted weekly on all students receiving special education services or experiencing significant difficulties in reading. Frequent monitoring served several purposes. First, it provided a basis for evaluation of instructional programming for individual students with difficulties. Second, it provided information to help teachers make decisions about goals, materials, levels, and groups. Third., it documented progress for students on Individual Education Plans (IEP). The school psychologist was responsible for facilitating the strategic and intensive monitoring procedures. They helped by (a) identifying students who would benefit from either strategic or intensive monitoring, (b) identifying goals and monitoring level material (i.e., difficulty of material), and (c) organizing data collection procedures.

Collecting data on a regular basis was of no use if the data were not utilized. Thus, in each building, a system of data-review was established. School psychologists, along with other education district staff, provided training to teachers and support staff on graphing student progress (i.e., setting up graphs, establishing baselines, setting goals, drawing trend lines). The school psychologist was responsible for meeting with grade-level staff on a weekly basis to review student graphs. If individual or groups of students were not making progress, then the team reorganized instructional resources and designed interventions. The school psychologist was available to these teams as an instructional consultant. Thus, they observed in the classroom and made recommendations to teachers on how instruction could be modified for students.

GRADE-LEVEL TEAM MEETINGS

The principal arranged a common preparation time for teachers in each of the different grade levels. Grade-level teams met on a weekly basis to examine student graphs and make decisions about student progress. The school psychologist was assigned to attend grade-level meetings on a regular basis. If the school psychologist were unable to attend, then the grade-level team leader met with the school psychologist at an alternative time to discuss students of concern and review the team's decisions.

CONCENTRATED RESOURCES

Each grade level had reading instruction scheduled at the same time. Grade level teams were responsible for allocating instructional resources (i.e., paraprofessionals and volunteers) based on student need. The school psychologist was available to assist in decision making with respect to these instructional resources. All decisions were data-based, using the measurement system described earlier.

FLEXIBLE GROUPING

The elementary school organized itself to deliver three levels of reading remediation, aside from the typical reading curriculum that met the needs of students achieving at grade level. The first level involved within-class and within-curriculum interventions designed to provide the extra instruction needed to keep a student up with grade-level curriculum. The second level involved replacing the typical reading curriculum with the *Direct Instruction: Reading Mastery Curriculum* (Engelmann et al., 1995). The third level of remediation involved replacing the typical curriculum with the *Direct Instruction: Corrective Reading Curriculum* (Engelmann et al., 1999). All students were grouped according to skill level and moved in and out of the three levels using data to guide decisions. The school embraced the notion that students were not locked in to a specific group for the entire year. Students could move in and out of groups according to their rates of progress. The school psychologist was available to assist teachers in administering Direct Instruction Placement Tests, to determine appropriate grouping, and to assist grade-level teams in making decisions about changing levels of remediation.

FOCUS ON COLLABORATION AND TEAMWORK

Collaboration and teamwork was an integral factor in determining whether the school district would meet their goals. District staff realized that the public was demanding accountability from schools, particularly with the addition of high-stakes testing in the state. The principal created an atmosphere of collegiality and collaboration by obtaining input from staff on the overall service-delivery model for reading and how to concentrate resources in areas of need. The state operates under a categorical service-delivery model for serving students with special education needs. With the knowledge that many students experiencing significant learning problems do not qualify for special education, the challenge was to redesign the service-delivery model so that *all* students' needs could be met in the area of reading. The district realized that the resources of general education, compensatory education, and special education would need to be integrated to address the needs of students with learning problems. Furthermore, they realized that there would need to be increased flexibility in the use of special education support personnel. Special education teachers would not be limited to teaching only special education students. Nor would special education teachers always teach special education students. Students were assigned to instructional groups based on achievement levels, not by disability categories. Switching over to this type of service delivery philosophy *required* that teachers and support staff work as a team to meet the needs of students.

As was discussed earlier, grade-level teams were formed to review student data on a regular basis. These teams identified the instructional needs of students and allocated resources (paraprofessional and teaching staff) according to need. Therefore, some teachers received very little paraprofessional support while others received a great deal of support. The determining factor was ***student need***. The school psychologist helped foster collaboration and teamwork among the grade-level teams by continually redirecting the staff toward the identified goals and the subsequent needs of individual and groups of students.

EVALUATION OF PROGRESS TOWARD GOALS

To determine whether progress was being made toward the "system-level" goal, student progress was measured using both Benchmark-Testing and Strategic Monitoring (Shinn et al., in press). All students were assessed using Benchmark Testing, and Strategic Monitoring was used for students of concern. Each year, formative and summative data are analyzed, and changes are made to the service-delivery model when warranted. School psychology services are continually evaluated using these data and are targeted at grades where performance is of most concern. Without this information, the district would not be in a position to make decisions about individual students and the overall service-delivery model of psychoeducational services.

Figure 1 summarizes Benchmark Testing data from the 1996–1997 school year, the first year of the new service-delivery model. The target line is the goal that was set for each grade level. The data points represent the median performance of the students at each grade. With the exception of first grade, the median performance of each grade level was at the projected goal in the winter. Because the first grade scores were not lower than expected, interventions were implemented with all students who were below the Winter Goal of 20 WRC per minute.

Figure 1. 1996–1997 oral reading data by grade

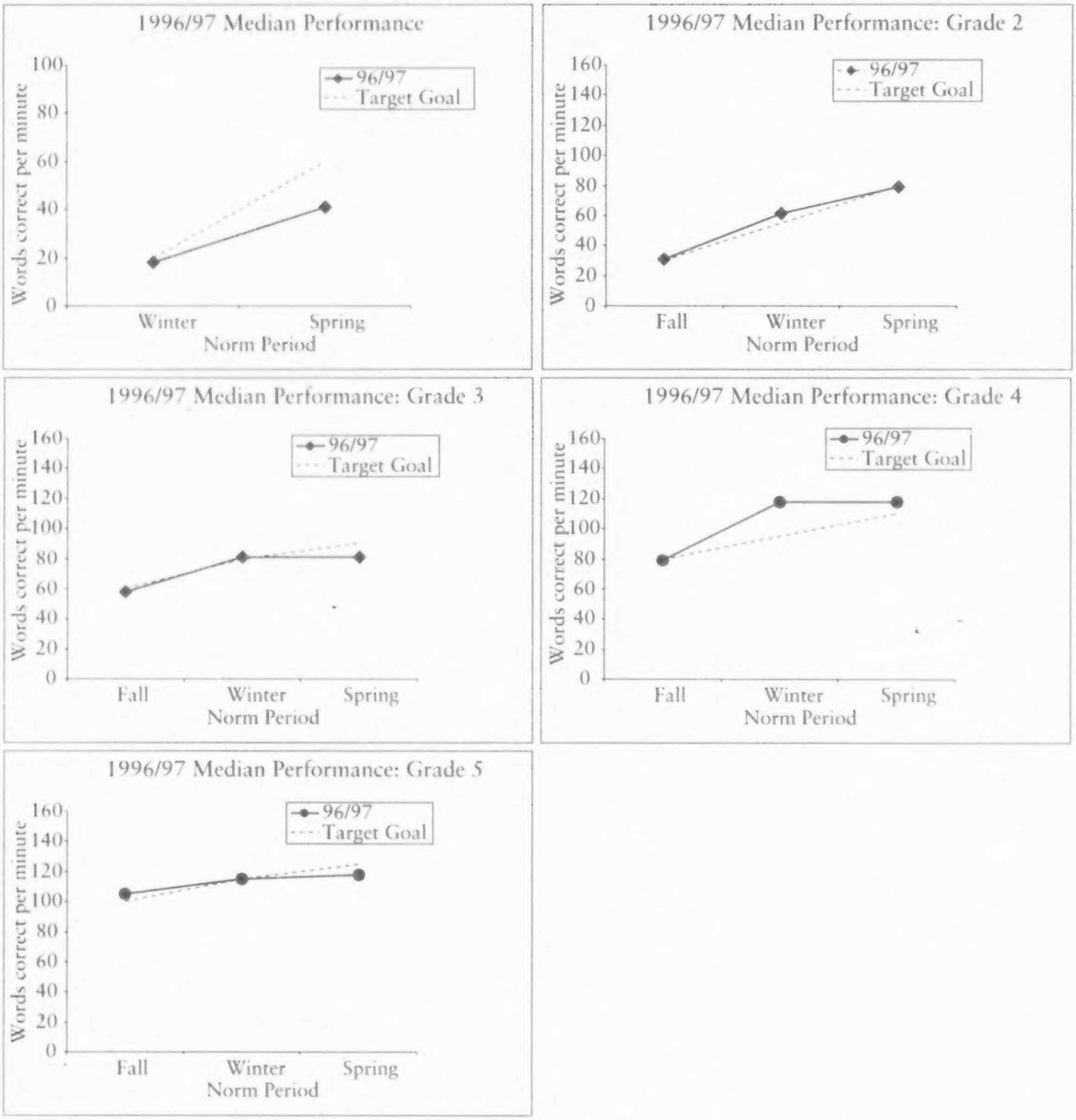
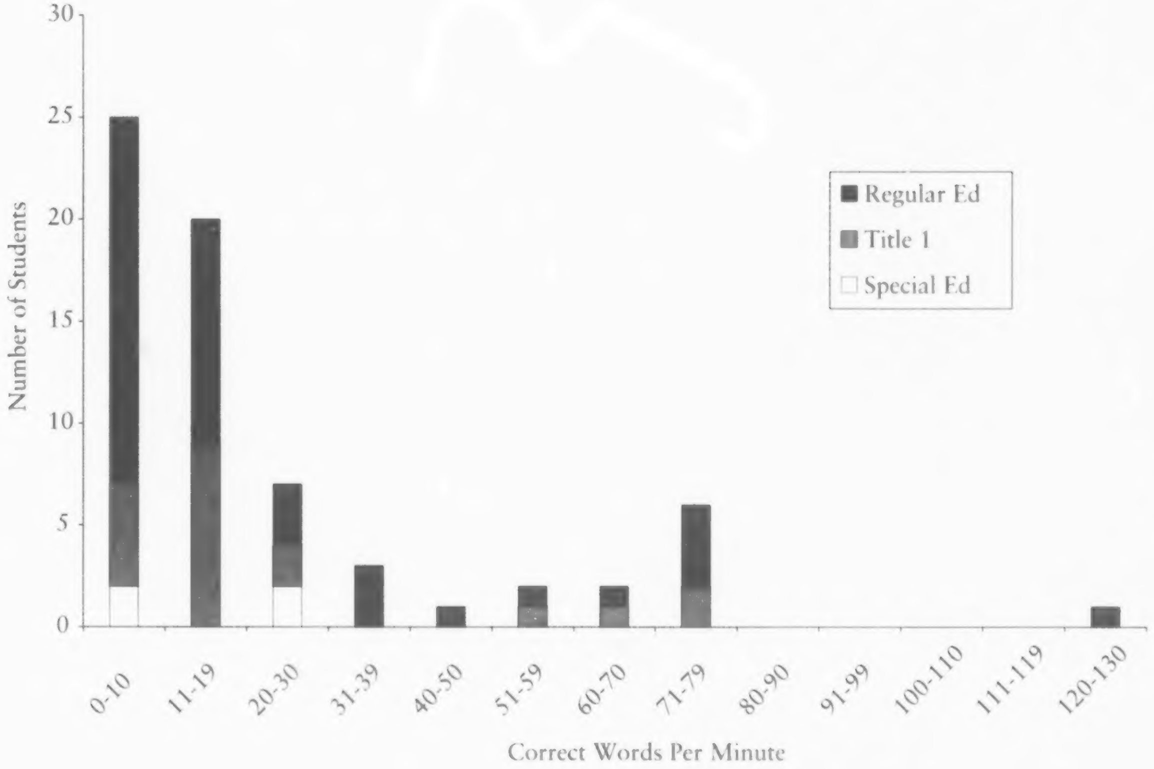


Figure 2 is an additional example of how Benchmark data were summarized and used to make decisions. This table displays the number of students who read at varying reading rates. As seen in Figure 2, 23 students read below the target goal in January. Of these students, none was receiving special education services, and four received Title One services. This information provided teams with a way to target services at specific students and assisted in making decisions about referring students for special education services.

At the end of the 1996–1997 school year, the median score for all grades except for first grade was

Figure 2. Grade 1 oral reading data: Winter 1997



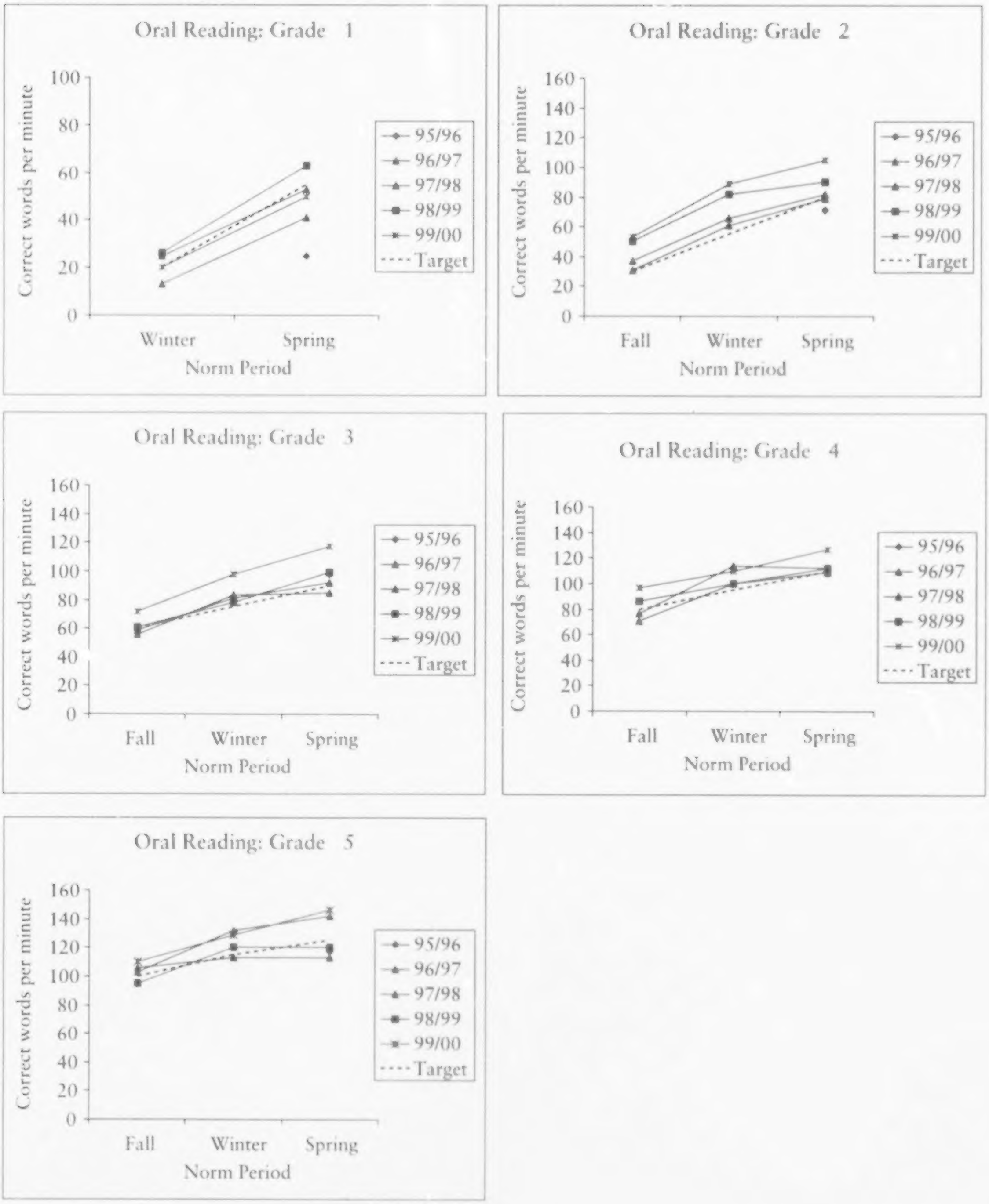
at the projected goal. Although significant progress had been made as compared to the previous school year, the district was not satisfied with the results for two reasons. First, even though the median performance for each grade level met the projected goal, 50% of students did not reach the goal. The district wanted *every* child to be reading at the projected target rate. Second, the scores for first grade were well below the target rate. A great deal of research conducted in beginning reading indicates a high correlation between poor reading performance at the end of first grade and poor reading performance in the later elementary grades. For example, Juel (1988), found the correlation between poor reading in first grade and poor reading in fourth grade to be .86.

The district wanted to intervene with beginning readers as quickly as possible to prevent future reading difficulties. For this reason, reading consultants were hired to work on incorporating the beginning reading research into the district's beginning reading instruction (grades K–2). School psychologists from the district attended this training and were instructed to incorporate the training into their instructional consultation. Figure 3 displays data collected through the 1999–2000 school year. As displayed on Figure 3, the median performance at all grade levels has increased significantly, with the median scores for each grade level surpassing the projected goal. Most important, very few students are reading below the target goal.

IMPLICATIONS FOR SCHOOL PSYCHOLOGY SERVICE DELIVERY

This case example establishes a system-wide reading goal and uses student reading data to evaluate school psychology and educational services. To some people, it may seem that evaluating school psychology services based on student achievement data is a stretch, especially if the role of the school psychologist is as consultant. However, school psychologists are increasingly being called upon to provide leadership

Figure 3. Oral reading data by grade: 1996–2000



to both regular and special educators in the design, delivery, and evaluation of instructional programs. A meaningful way to evaluate the effectiveness of their leadership is to examine student achievement data. In the previous case example, the school psychologist played a pivotal role in moving the educational team toward increasing student achievement in reading. The key facet was coordinating and implementing benchmark and strategic monitoring systems and consulting with the team to design *and* implement interventions when student progress was insufficient. Without regular progress data, the district would not have been in a position to intervene early with students of concern and make summative judgments regarding goal attainment.

Collecting this type of data has affected the role of the school psychologists in this particular district. There has been a dramatic decreasing in assessment for special education eligibility, in part, because many more student needs are able to be accommodated within the regular education environment. Owing to the decrease in formal testing, the school psychologists are able to devote much more time to instructional and behavioral consultation. On a yearly basis, decisions are made about the amount of school psychology support that should be provided to particular grade levels. For example, in the previous case study, the school psychologist was directed to spend more time consulting with first grade staff during the 1997–1998 school year in response to the outcome data. How much impact school psychology services had on student achievement certainly is open to debate. However, the critical factor is not necessarily the amount of impact the school psychologist had on student reading achievement, but the fact that presently very few students are reading below the district's target goal.

SUMMARY

Schools are becoming increasingly more accountable for student outcomes. This accountability movement *necessitates* the use of student outcome data to evaluate the effectiveness of the services provided by school psychologists and other educational service providers. The educational research literature contains numerous references to results; however, results have rarely been operationalized. By using valid and reliable student outcome data is one way to operationalize educational results.

This chapter focused on how school psychoeducational services may be evaluated using student outcome data. Critical variables in this process include clearly defined goals, direct performance indicators of student achievement, a relationship between psychoeducational services and goals, a focus on collaboration and teamwork, and formative and summative evaluation of progress toward goals. All of these variables operate interdependently to produce results. Concentrating on results does not negate the importance of process (i.e., a good service-delivery model). Rather, results tell us whether the process is effective and to what extent the process needs to be reexamined and adjusted. Regular monitoring, followed by adjustment, is the only way to expect success.

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This article describes the development of a data-based service-delivery model for school psychologists practicing in the Minneapolis Public Schools. Methods used to evaluate the effectiveness of school psychological services are described, including the use of time analyses and tabulation for program evaluation and the use of Reading Curriculum-Based Measures to evaluate student outcomes.

Fairchild, T. N., and Zins, J. E. (1992). Accountability practices of school psychologists: A 1991 national survey. *School Psychology Review, 21*, 617–627.
This article details the results of a 1991 survey of the accountability practices of school psychologists. The survey is a follow up to a 1984 study by the same authors. Results from both studies were compared for differences. However, the authors found no significant differences in reported accountability practices between the 1984 and the 1991 surveys. Implications for practice are discussed.

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This article describes and critiques three methods for monitoring student progress toward competent reading: Mastery Measurement, CBM, and Dynamic Indicators of Basic Early Literacy Skills. The authors discuss six considerations in selecting monitoring systems that produce meaningful information about students. Next, the three methods are critiqued against the six considerations. Finally, the authors discuss areas of future research to provide school-based practitioners with a meaningful monitoring system.

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In this book, the author examines the conditions and theory behind obtaining dramatic results in school-based settings. The foundation for results, as presented by Schmoker, is meaningful teamwork combined with setting clear, measurable goals and regularly collecting and analyzing performance data. The author emphasizes the importance of principles and practices that are simple, supported by research, and relatively few in number.

Shinn, M. R., Shinn, M. M., Hamilton, C., & Clark, B. (in press). Using Curriculum-Based Measurement in general education classrooms to promote reading success. In M. R. Shinn, G. Stoner, and H. M. Walker (Eds.), *Interventions for achievement and behavior problems: Preventive and remedial approaches.* Bethesda, MD: National Association of School Psychologists.

The chapter describes the use of CBM in general education classrooms. Prevention and promotion activities are described and procedures for conducting Benchmark Testing and Strategic Monitoring are detailed along with graphic examples.

12

Best Practices in Preventing and Managing Stress and Burnout

E. Scott Huebner
University of South Carolina
Tammy Dew Gilligan and Harriet Cobb
James Madison University

OVERVIEW

The purpose of this chapter is to discuss sources and management of occupational stress among school psychologists. First, the nature and correlates of school psychologists' stress and burnout reactions are delineated. Both individual and organizational factors are addressed. Second, strategies to prevent job stress and promote emotional resilience are provided. Although a model of well-being is presented that incorporates environmental as well as personal variables, the authors believe that school psychologists can exert influence over their professional destinies, provided that they proactively attend to their own needs as well as those of their clients.

For many years, studies of occupational stress and burnout have been prominent in the organizational psychology literature. Nevertheless, only a handful of studies of stress and burnout has been reported in the school psychology literature. Given that many school psychologists are interested in expanding their direct and indirect intervention-related service activities, it is surprising that school psychology researchers and practitioners have shown little attention to the affective reactions of the service deliverer (i.e., the school psychologist). Knowledge of counselors' affective states has long been considered central to a complete understanding of counseling processes and outcomes (Corey, 1996). The emotional well-being of counselors and other related professionals, such as school psychologists, may facilitate or impede effective service delivery. For example, an optimistic, emotionally resilient school psychologist may interact very differently with clients than a pessimistic, emotionally stressed school psychologist.

School psychologists have undertaken extensive explorations of numerous aspects of intervention-related services, such as consultation with teachers and parents. Although studies have investigated a variety of parameters of the consulting relationship (e.g., consultee characteristics, consultation process variables, intervention integrity), few studies have directly explored the affective and motivational characteristics of the consultant. Such neglect could undermine school psychologists' efforts to implement, evaluate, and understand the effectiveness of their services. Similarly, such neglect could also impede their efforts to develop systematic change strategies to promote emotional resilience and/or improve their work environments.

Occupational stress and well-being have been recognized by some authors as important areas of concern among people-oriented service professionals, including school psychologists (e.g., Huebner, 1992; Wise, 1985). Among psychologists, occupational stress has been operationalized and studied mostly through the use of occupational burnout measures. Initially defined in relation to crisis workers (Freudenberger, 1974), the burnout concept as been elaborated upon by various researchers, most notably by Christina Maslach and her colleagues (e.g., Maslach & Goldberg, 1998). In its broadest terms, the concept relates to affective responses by professionals to the chronic stresses of working in a professional relationship with others in need. More specifically, Maslach argues that burnout is multidimensional, composed of three related, but differentiable, constructs: emotional exhaustion, depersonalization, and reduced personal accomplishment. Emotional exhaustion relates to feelings of being emotionally overwhelmed by the demands of the job. Individuals experiencing emotional exhaustion feel emotionally depleted and often reduce their involvement with others, including clients and co-workers. Depersonalization is experienced through negative, detached responses to clients. For example, school psychologists may develop cynical attitudes toward some consultees and/or clients and "blame the victims" for their difficulties. Reduced personal accomplishment refers to feelings of decreased professional competence. For example, school psychologists may develop feelings of helplessness with respect to their ability to make a difference and to assist those in need. Current research suggests a developmental model of burnout, in which emotional exhaustion occurs initially, followed by depersonalization responses, while reduced professional efficacy occurs separately (Maslach & Goldberg, 1998). Taken together, these burnout dimensions reflect a developmental transition from a positive problem-solving approach toward job responsibilities to a negative, avoidant approach. Such a transition is consistent with Freudenberger's (1974) notion that burnout-prone individuals begin their careers as highly motivated, idealistic, and caring.

The consequences of burnout can be varied. Burnout reactions have been related to physical problems, psychological disorders, drug and alcohol abuse, and interpersonal difficulties, at home and on the job (Maslach & Goldberg, 1998). Furthermore, burnout has been shown to predict the experience of subsequent occupational stressors (Mills & Huebner, 1998). Although some psychologists may leave the profession, others may remain, but operate at a level of reduced productivity. Such outcomes are particularly tragic for professionals who begin their careers with high levels of motivation, skill, and enthusiasm. Whatever the case, such outcomes negatively impact the many consumers of school psychological services, which include individuals (e.g., child, teacher), groups (e.g., parent groups), and organizations (e.g., school districts, community agencies).

A few studies of the prevalence of burnout among school psychologists have been conducted. In the most recently reported national (U.S.) survey of practicing school psychologists, Huebner (1993) found that more than 25% of the respondents reported high emotional exhaustion, 3% reported high depersonalization, and 12% reported a reduced perception of professional accomplishment. A total of 35% of the sample reported some level of desire to leave the profession within the next 5 years. Compared to a sample of consulting psychologists, school psychologists reported higher levels of emotional exhaustion and depersonalization as well as lower levels of professional accomplishment. Compared to a sample of clinical/counseling psychologists, the school psychologists reported equivalent emotional exhaustion, lower levels of depersonalization, and lower levels of personal accomplishment. Thus, school psychologists may be at greater risk for various forms of burnout than other psychological service providers.

BASIC CONSIDERATIONS

Recent models of burnout incorporate personal and contextual variables. In these models, stress and burnout reactions develop as the result of the interactions between individual difference variables (e.g., demographic characteristics, personality factors, skills and training differences) and environmental variables (e.g., organizational and interpersonal variables). In other words, burnout is conceptualized as a mismatch between the person-job fit. In these models, attention is thus directed toward both personal and situational sources of stress and burnout. In our model, burnout is conceptualized as a function of risk/resiliency factors. Borrowing from the current paradigm in developmental psychopathology, risk factors for problems interact with individual strengths and vulnerabilities to predict the degree of resilience an individual possesses (Cicchetti & Garmezy, 1993). Protective mechanisms in the environment may serve to mediate risks and vulnerabilities to produce wellness and some "immunity" to burnout. For school psychologists, an analysis of the risk factors, personal strengths and vulnerabilities, and protective mechanisms may help in the understanding and prevention of the process of burnout.

Personal Risk/Resiliency Factors

Personal risk factors include demographic variables and personality characteristics (both strengths and vulnerabilities). The variables of school psychologists' age and years of experience have been the only demographic variables to demonstrate robust relationships with burnout. Younger, less experienced school psychologists are more likely to report emotional exhaustion, depersonalization, and reduced professional accomplishment (Huebner, 1993). School psychologists' age level has also been linked with the experience of job-related stressors, such as interpersonal conflict and time management difficulties (Huebner & Mills, 1997), again with younger school psychologists more likely to experience stressors.

Personality factors have also been associated with burnout reactions. Introversion and disagreeableness both relate to feelings of emotional exhaustion. In addition, introversion relates to reduced professional efficacy, and disagreeableness relates to depersonalization (Mills & Huebner, 1998). Sandoval (1993) found that persons who reported overall low self-esteem, narrow interests, and difficulty coping with ambiguity were more likely to report burnout reactions. Conversely, extraversion, flexibility, and optimism were personal characteristics associated with strength and resilience.

Organizational Risk Factors

The school psychology literature has identified organizational factors, specifically job stressors, that are quite deleterious. Wise (1985) reported the following nine stressful factors:

1. Interpersonal conflict (interactions with resistant teachers or uncooperative administrators)

2. High risk to self and others (dangerous or crisis situations, due process hearings, child abuse cases, teachers' strikes)

3. Obstacles to efficient job performance (inflexible and/or incompetent supervisors, inadequate secretarial help, feeling caught between the child's needs and administrative constraints, lack of contact with professional colleagues)

4. Public speaking (inservice workshops, public speaking engagements, parent groups)

5. Time management (backlog of reports or referrals, "feeling behind")

6. Legal mandates (due process, compliance with regulation issues)

7. Hassles (carrying materials between schools in bad weather, driving)

8. Professional enrichment (difficulty keeping up with the literature in the field)

9. Insufficient recognition of work ("not enough strokes")

Additionally, other organizational factors are risks. They include:

1. Role conflict

2. Role ambiguity

3. Role overload

4. The "fit" between the person and the job

Role conflict is a crucial organizational variable in burnout reactions (Pierson-Hubeny & Archambault, 1987; Wright & Thomas, 1982). Role conflict occurs when two or more conflicting job demands impinge on school psychologists in their delivery of psychological services. For example, role conflict may occur when school psychologists advocate for particular services for a child with special needs (e.g., inclusion) in the face of opposition from others, such as a principal who wants a child excluded from the regular classroom environment.

Role ambiguity is also a crucial variable in the development of burnout (Huberty & Huebner, 1988). Role ambiguity refers to a lack of clarity concerning the school psychologists' roles and responsibilities, privileges, status, objectives, etc. For example, school psychologists continue to debate their most important roles and functions—now and for the future—in the face of severe short- and long-term shortages of practitioners and trainers. This lack of agreed upon identity may be confusing to consumers, thus serving as a continuing source of frustration for school psychologists who seek to increase the perceived value of their services.

Role overload has also been implicated in burnout (Huberty & Huebner, 1988). Role overload can relate to quantitative or qualitative overload. Quantitative overload is defined as too many job demands relative to the amount of time available to meet them. Qualitative overload involves task complexity; that is, tasks that are difficult to complete effectively. Both quantitative and qualitative overload are interrelated with the quality and quantity of organizational resources available to school psychologists (Huebner, 1993). Examples of stressors related to qualitative overload among school psychologists include dealing with child abuse cases, suicide cases, working with difficult parents or teachers, and a lack of appropriate services for children (Huebner & Mills, 1997). Examples of quantitative overload for school psychologists include high student-to-school psychologist ratios (Huebner & Mills, 1994), heavy report writing responsibilities, pressure to complete a prescribed number of cases, and keeping up with the professional literature (Huebner & Mills, 1997; Wise, 1985).

Interestingly, in one study of quantitative overload, school psychologists' actual caseloads did not predict burnout responses whereas the discrepancy between their actual and ideal caseloads did predict burnout (Huebner & Mills, 1994). Such a finding underscores the notion that although contextual factors are important in occupational adaptation, it is the "fit" between the person and the job that must be understood.

Roles and Functions

Studies of the relationships among the frequency levels of various job functions and burnout have also supported the role of organizational factors. In one study, the number of hours spent in assessment-related activities correlated negatively with a sense of professional accomplishment, whereas the number of hours spent in intervention-related activities correlated positively with a sense of professional accomplishment (Huberty & Huebner, 1988). In another study, the perceived importance of consultation and counseling activities, but not assessment activities, correlated significantly with professional accomplishment. Nevertheless, the perceived importance of assessment activities was related significantly to emotional exhaustion and depersonalization reactions (Huebner, 1993). The latter findings suggest that changes in roles and functions must be considered carefully because they relate differentially to burnout dimensions. For some school psychologists, it is thus possible that increases in intervention activities along with a concomitant decrease in assessment activities could increase self-perceived professional accomplishment while also increasing the potential for emotional exhaustion or depersonalization reactions. For other school psychologists, increases in assessment-related activities could lead to decreases in emotional exhaustion along with increases in boredom or frustration. Such reactions may be associated with the relative frequency with which school psychologists encounter occupational "flow states" (Csikszentmihalyi, 1990) in which the level of job difficulty is optimally matched to their skills, with tasks being neither too easy (leading to boredom) nor too difficult (leading to anxiety and frustration).

Analysis of these multiple factors that relate to school psychologists' well-being can help elucidate individual's risk of burnout. Consider three individual school psychologists with differing risks, strengths and vulnerabilities, and protective mechanisms (see Figure 1). Alice is a generally optimistic person (strength) who has a tendency to be somewhat anxious (vulnerability). Job expectations have felt overwhelming at times, and indeed her testing load for special education eligibility is excessive (organizational risk factor). However, she has a supportive supervisor who serves as a buffer between Alice and some inflexible administrators (organizational protective mechanism). When Alice initiated a focused discussion with her supervisor about role overload, she received emotional support and suggestions for renegotiating her caseload with one particular principal. Generally, aside from some anxiety during the last 2 months of the school year, Alice's overall sense of well-being is strong. She is at low risk for burnout.

Mark, on the other hand, has two organizational risk factors: an excessive workload and an ineffective supervisor. Furthermore, while his organizational and time management skills are good (strength), he is somewhat pessimistic (vulnerability). His family is emotionally supportive (organizational protective mechanism), however, and after participating in indi-

Figure 1. Resiliency/Burnout Model for School Psychologists

Risk factors	*Personal characteristics (Strengths/vulnerabilities)*		*Protective mechanisms*	*Risk for burnout*
(Alice) Role overload	Optimistic tendencies	Predisposition to anxiety	Good supervisor	Low
(Mark) Role overload and ineffective supervisor	Good organizational and time management skills	Pessimistic tendencies	Personal counseling and supportive family	Mild to moderate
(Susan) Role overload and ineffective supervisor and divorce	Extraversion	Limited experience as a school psychologist	None	High

vidual therapy (protective mechanism), Mark moved from being at high risk to only mild risk for burnout.

Susan is at great risk for burnout. Not only does she have role overload and an ineffective supervisor (organizational risk factors), she is caring for an aging parent (personal risk factor). While she characterizes herself as an extravert (strength), she has only been a school psychologist for 2 years (vulnerability), and is experiencing isolation both on the job and at home (risk factor). Without significant intervention, she is at risk for depression and burnout. Intervention may need to include personal counseling as well as a major job change.

BEST PRACTICES

Preventing or mediating stress and burnout among school psychologists may be considered a dynamic process, with strategies in place to promote protective mechanisms at the intrapersonal, interpersonal, and organizational levels within both pre-service and inservice environments. The common goal of these strategies is to increase resiliency in school psychologists at the individual and systemic level. The following approaches should be considered as trainers, supervisors, and practicing school psychologists strive for optimal well-being and functioning on the continuum of professional burnout.

Pre-service Environment

Strategies for preventing and mediating stress and burnout at the pre-service training level include both student and training program responsibilities. A combination of these approaches can effectively serve as protective mechanisms and thus increase student resiliency at an early stage of their professional development.

PROTECTIVE MECHANISMS OF EFFECTIVE TRAINING PROGRAMS

Effective job skills mitigate job stress. Inadequate pre-service training in technical skills or social-emotional competencies can be risk factors for burnout. For example, school psychologists' ratings of their self-perceived competence in providing consultation services have been related significantly to all three burnout dimensions (Huebner, 1993). As school psychologists move to more diversified roles (e.g., crisis counseling, mental health consultant), appropriateness of pre-service preparation will likely become increasingly related to school psychologists' experience of stress.

Training programs should strive to provide a milieu that emphasizes academic/skills training *and* interpersonal and intrapersonal growth. This emphasis can begin with a program philosophy that recognizes the value in personal growth. Programs also should attempt to establish screening procedures of student applicants that consider intrapersonal and interpersonal characteristics to ensure a goodness of fit between the student, program, and profession. One such procedure is the use of group interaction interviews. This type of screening procedure allows for an on the spot picture of an applicant's flexibility, tolerance for ambiguity, and agreeableness. As was mentioned previously, research indicates that specific personality factors are associated with burnout reactions. Training programs' consideration of potential students' extraversion/introversion, disagreeableness, self-esteem, range of interests, and coping strengths (optimism and tolerance for ambiguity) could increase the likelihood that future school psychologists will be less vulnerable to stress and burnout.

Faculty members play a crucial role in establishing a pre-service environment that prepares students to mitigate job stress and professional burnout. Faculty modeling of self-care, well-functioning, stress management, and personal growth is a necessary component of student well-being and preparation. Faculty can also assist by embedding learning activities within the curriculum that promote intrapersonal and interpersonal development. These might include reflective writing, experiential activities, opportunities for teamwork, and frequent self-assessments. Training programs should consider stress management and stress inoculation seminars or workshops as a regular aspect of their program. Programs can reduce the likelihood of stress overload by fostering an atmosphere of cooperation rather than competition among students. A clear emphasis in the training milieu and curriculum on personal growth leads to frequent faculty evaluation of students' progress and areas of strengths and weaknesses. Thus, faculty should be prepared and willing to make developmental or preventative recommendations (e.g., participation in group or personal therapy) as well as remedial intervention suggestions. Faculty should also require students to join professional associations and attend professional conferences early in their training. This emphasis on professional networking and continuing education hopefully initiates an unswerving appreciation for peer support and life-long learning.

What follows provides a summary of protective components of effective training programs:

1. Up-to-date training
2. Program philosophy that emphasizes personal growth
3. Effective screening procedures to ensure goodness of fit with training program
4. Faculty modeling of self-care, well functioning, and stress management
5. Curriculum that promotes intrapersonal and interpersonal development
6. Provision of remedial interventions for students having difficulty
7. Atmosphere of cooperation and support
8. Requirements for student involvement in professional associations

RESPONSIBILITIES OF STUDENTS

Students also assume responsibility in the pre-service environment for the development of effective stress management strategies and the prevention or mediation of burnout. Most important, school psychology students should possess a general openness, flexibility, and willingness to explore and develop intrapersonal and interpersonal characteristics. Students must be active participants in program components such as:

1. Peer mentoring
2. Stress management training
3. Conflict management training
4. Professional process groups
5. Other self-awareness activities

Students must be willing to hear, accept, and follow feedback and recommendations for personal development including developmental or remedial intervention suggestions for personal or group therapy. One example of the importance of the student's role in mediating stress involved a second-year school psychology practicum student. This student felt that a faculty member did not fully appreciate her personal circumstances that were interfering with the completion of practicum assignments. Although the student became increasingly upset and withdrawn from the faculty member, she did discuss her concerns during a regularly scheduled process group meeting. As a result of feedback and encouragement from the process group, the student came forward to the faculty member in an emotionally mature manner to discuss her concerns. This led to mutual understanding and a successful resolution of the problem.

Inservice Environment

As with the pre-service environment, approaches to preventing and mediating stress and burnout are the responsibility of both the individual school psychologist and the system or organization. Combinations of protective mechanisms provided by the individual and the system's infrastructure can enhance resiliency of the professional school psychologist.

PROTECTIVE COMPONENTS OF EFFECTIVE ORGANIZATIONS

Continuing professional development is essential for the well-being of school psychologists. As Brown (this volume) states, new technologies, new information, and changing expectations mandate school psychologists' life-long learning activities. Participating in NASP's CPD programs should contribute to a sense of competency and satisfaction on the job.

Practicing school psychologists benefit from supervision and formalized peer support. Social support, especially from supervisors, is inversely related to depersonalization reactions of school psychologists (Huebner, 1994). Effective supervision can provide technical guidance, organizational integration, and nurturance (Russell et al., 1987). Supervision should involve a balance of task-oriented problem solving within the context of a positive work relationship. Recognition of the importance of supervisory support, particularly from supervisors who have been psychologists themselves, is crucial given the documented inadequacies of supervision experiences in school psychology (Zins, Murphy, & Wess, 1989). Such issues may be particularly important for practitioners in rural settings, many of whom report the lack of appropriate supervision services (Jacob-Timm, 1995).

Support from peers and other related professionals also helps to prevent burnout. Isolation from colleagues reduces opportunities for various types of support (Last & Silberman, 1989), which can be only partially provided by supervisors who are in a position of formal authority. For example, formal and informal interactions with peers can involve supportive functions, such as receptive listening, affirmation of competencies, technical information, emotional support, psychological insight, and "social reality" sharing (Pines, 1982). Professional peer support groups, such as those described by Zins et al. (1989) are particularly important given psychologists' reluctance to seek professional treatment for themselves since "helpers should need no help" (Millon, Millon, & Antoni, 1986). Systematic, individualized mentoring programs, in which new professionals are teamed with seasoned veterans, are also likely to be beneficial. The organizational infrastructure must encourage effective supervisory and collegial interactions to prevent and/or manage burnout.

As was previously discussed, burnout reactions have been connected to role conflict (i.e., two or more conflicting job demands impinge on service delivery), role ambiguity (i.e., lack of clarity concerning roles and responsibilities), and role overload (i.e., quantitative or qualitative complexity and demand). Organizations employing school psychologists should work toward reduction or elimination of these factors. Psychologists themselves can play an important role in facilitating a positive organizational structure for psychological services delivery. For lone school psychologists, good negotiating skills are essential.

In summary, organizational approaches that enhance the professional's resiliency to stress and burnout include the following:

1. Good supervision opportunities

2. Formalized peer support groups

3. Minimal role conflict

4. Clear delineation of roles and responsibilities

5. Avoidance of role overload

RESPONSIBILITIES OF THE PROFESSIONAL SCHOOL PSYCHOLOGIST

The practicing school psychologist also assumes personal responsibility for preventing and mediating burnout. As with students in training, the professional school psychologist should possess a general openness and willingness to evaluate levels of stress and burnout and explore intrapersonal and interpersonal characteristics that may contribute to this process. An initial step is to conduct a personal assessment of stress and burnout and develop an individualized stress intervention plan (Huebner, 1993) or an individualized effectiveness plan (Thomas, 1995). School psychologists must take the reflective time necessary, however, to envision an individualized stress management plan. This may mean visiting a favorite quiet spot and contemplating what strategies or changes must occur or lunching with a colleague to provide mutual support for this activity.

One organizational professional approach is for school psychologists to seek out and fully participate in supervision opportunities and peer-support groups. School psychologists should also maintain their membership and participation in professional associations because these provide valuable protective networking opportunities and support of the professional identity. In a similar fashion, school psychologists should engage in meaningful professional development activities throughout their career.

Studies of relationships among the frequency levels of various job functions and burnout have also supported the role of organizational factors. Thus, it may be necessary for school psychologists to modify or change their daily work schedules to allow for breaks and spacing of desirable versus less desirable professional activities

The professional school psychologist should also attempt to maintain a personal physical and mental health self-care plan. An appropriate balance of exercise, proper nutrition, and regular medical examinations is critical to this self-care plan. Individuals must also be willing to seek out appropriate physical and mental health interventions as needed.

The ability to maintain a high level of wellness over the course of a career was reflected upon by experienced school psychologists in a recent study by Guest (2000). A number of school-based practitioners in her study reported enhanced awareness and skills in self-care through a greater separation of their personal and professional lives. Such experiences included an "increased ability to set boundaries on how much they could do, greater ability to say 'no,' and increased ability to set priorities that reflected what they could realistically accomplish" (Guest, 2000, p. 250).

Other individual responsibilities for preventing and mediating stress and burnout include the use of cognitive reframing and maintaining a sense of humor and perspective throughout the work day (Thomas, 1995). School psychologists must remember the important role of optimism in contributing to an overall sense of well-being. If optimism is elusive, then help or change is needed. Optimism can be learned at any point in time, as was noted in the positive psychology movement (Seligman & Csikszentmihalyi, 2000).

The professional's responsibilities for tasks to mediating stress and burnout are summarized below:

1. Openness and willingness to self-evaluate current levels of stress and burnout

2. Commitment to design a personalized stress management plan

3. Participation in supervision and peer-support groups

4. Participation in professional associations and professional development

5. Changing the daily rut of job functions and roles

6. Partnering with other school personnel to try new activities

7. Maintaining a personal and mental health self-care plan

8. Maintaining a sense of optimism and humor

SUMMARY

Burnout refers to the negative consequences of chronic job stress. It is composed of the affective experiences of emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment. School psychologists are vulnerable to professional burnout and, according to research, may be at greater risk than other helping professionals. Risk factors for burnout (e.g., role overload) interact with individual strengths (e.g., optimism) and vulnerabilities (e.g., introversion) to predict the degree of resilience an individual possesses. Protective mechanisms in the environment, such as appropriate supervision and peer support, may mediate these risks.

Training programs have an obligation to select applicants who possess characteristics that are associated with the development of resilience. Training programs must then foster resiliency through a philosophy that promotes self-awareness, personal growth, and skill development. Graduates from "resiliency-building" programs have a responsibility to choose positions that offer a reasonable probability of job satisfaction (e.g., quality supervision, atmosphere of support, realistic role expectations, and continuing professional development). Furthermore, it behooves school psychologists to continue throughout their careers to develop personal resiliency and to advocate for protective mechanisms within their organizations. Maslach and Leiter (1997) articulate an excellent model to guide professionals, such as school psychologists, in the implementation of organizational change efforts to promote enhanced person-job fit.

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In contrast to the more typical stress-related models of burnout, Cherniss discusses burnout from the perspective of a professional's varying nature and level of ideological commitment and moral purpose related to her or his career. This book is of particular relevance to school psychologists and includes an informative case study of one school psychologist's successful efforts at changing his role and function.

Maslach, C. (1982). *Burnout: The cost of caring*. Englewood Cliffs, NJ: Prentice-Hall.

The reader should not be misled by the date of this text. It is one of the classics in the field. Maslach's book remains full of useful individual, group, and organizational change ideas to assist human services professionals in the prevention and/or management of occupational stress and burnout.

Maslach, C., & Leiter, M. (1997). *The truth about burnout*. San Francisco: Jossey-Bass.

This book is authored by two of the foremost researchers in the area of burnout and provides an excellent discussion of two problem-solving approaches (individual and organizational) to modifying person-job linkages to prevent job burnout and promote job engagement. Realistic case studies are included to illustrate the change process.

13 Best Practices in Professional Development

Michael Brown
East Carolina University

OVERVIEW

The completion of a graduate training program in school psychology provides the initial base of knowledge and skills for professional practice. Innovative technologies, changing expectations, and new information require school psychologists to continue learning throughout their careers. The purpose of this chapter is to provide a basis for school psychologists in developing and implementing effective continuing professional development plans for themselves and for psychologists they may supervise. After reviewing the history and present status of continuing professional development (CPD) in school psychology, a four-step model is presented for planning and implementing CPD activities. Two examples of integrating individual CPD activities with staff development activities are described that will encourage school psychologists to broaden their perspective on the role of CPD in effective professional practice.

One of the hallmarks of a profession is that it has a recognized body of specialized knowledge. Implied in this definition is the responsibility of the profession to educate its members at initial entry into the profession and as a continuing professional responsibility (Young, 1987). Incumbent upon a professional is the obligation to continuously improve one's knowledge and skills by becoming a lifelong learner (Houle, 1980). Role expansion and educational reform have placed increased demands on school psychologists' knowledge and skills, increasing the need for continuing professional development (Reiher & Triggs, 1995).

While individuals have always continued to learn through reading, discussions with colleagues, and through practical experience, the later half of the twentieth century has been marked by a move toward formal continuing professional education (Cervero, 1988). Continuing education has emerged as a primary purpose of many professional organizations (Schrank & Young, 1987), and most professional organizations encourage or require formal continuing education. Both the National Association of School Psychologists (NASP) and the American Psychological Association (APA) recognize the importance of CPD in their codes of ethics, and both have established formal programs to encourage their members to continue to develop and refine their work-related knowledge and skills.

NASP began a voluntary CPD program in 1975 (Walker, 1977). The program recognized three broad areas of competence in school psychology (assessment, intervention, and program development) and required school psychologists to obtain CPD credit in each of these three areas. Participation was low, however, and in 1984 the CPD program was dropped entirely (Batsche, 1990). While the NASP ethical standards recognize the obligation of school psychologists to participate in CPD, there is no minimum requirement for CPD activities in order to maintain association membership. APA established a continuing education program in 1975 (Hynd, Pielstick, & Schakel, 1981). The association focused its attention on establishing criteria and procedures for approving sponsors of more formal continuing education activities rather than specifying a minimum number of required hours of CPD, believing instead that state licensing boards should establish these criteria. APA continues to approve continuing education sponsors and has adopted a role as clearinghouse for CPD activities appropriate for psychologists.

At about the same time that the professional organizations were establishing continuing professional development programs, many states and regulatory boards began mandating CPD as a requirement for renewal of professional licensure (VandeCreek, Knapp, & Brace, 1990). The purpose of mandatory continuing professional development was to improve the quality of services provided to the public. Forty state boards of psychology required CPD by 1998, with several other states having plans to implement mandatory continuing professional development in the near future (American Psychological Association, 1998). The content of CPD is usually not mandated, although many states have specified that a certain number of hours must be earned in ethics. Increased accountability in public education has heightened the emphasis on continuing education for all public school personnel, including school psychologists, although state teacher credentialing systems have lagged in their requirement of CPD (Batsche, 1990).

While continuing education is most often discussed as a necessity to meet ethical, legal, and professional requirements, CPD also has personal, professional, and organizational benefits (Cervero, 1988; Houle, 1980; Hynd, Pielstick, & Schakel, 1981). Individuals can obtain enhanced personal satisfaction, improved skills, increased salary, job advancement, and increased adaptability to change. The profession gains enhanced public image, a mechanism for promoting professional competence and accountability, and increased adaptability to change. Organizations embracing continuing education may also have an enhanced public image and be viewed as a better place for employees, thereby promoting employee recruitment.

NASP establishes the ethical obligation of school psychologists to engage in continuing professional development. By virtue of membership in NASP each member agrees to comply with the Association's ethical standards. It is stated in the *Principles for Professional Ethics* (National Association of School Psychologists, 1997a) that

> School psychologists engage in continuing professional development. They remain current regarding developments in research, training and professional practices that benefit children, families and schools (p. 655).

Therefore, it is the ongoing obligation of the school psychologist to engage in continuing professional development as one facet of maintaining professional competency.

Similarly, APA's Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 1992) recognizes the need for ongoing education. It is stated in the ethical standards that:

> Psychologists who engage in assessment, therapy, teaching, research, organizational consulting, or other professional activities maintain a reasonable level of awareness of current scientific and professional information in their fields of activity, and undertake ongoing efforts to maintain competence in the skills they use (p. 1600).

That this is an ethical standard, which is an enforceable rule for professional conduct, attests to the importance placed by APA upon maintaining competence for the professional practice of psychology.

Continuing professional development is also a requirement for recertification and renewal of licensure. Most state boards of psychology require CPD for renewal of psychology licensure, and most state certification systems require documentation of continuing education for renewal of state certification. Nationally Certified School Psychologists (NCSP) must participate in CPD activities as a requirement for the renewal of the credential. Seventy-five hours of continuing professional development activities are required within a 3-year renewal cycle. A variety of activities are recognized, including formal workshops or courses, independent study, and research or professional service.

BASIC CONSIDERATIONS

Continuing professional development has been defined as:

> ...an ongoing process consisting of formal learning activities that (1) are relevant to psy-

chological practice, education and science, (2) enable psychologists to keep pace with emerging issues and technologies, and (3) allow psychologists to maintain, develop, and increase competencies in order to improve services to the public and enhance contributions to the profession (American Psychological Association, 2000).

To be most effective, CPD must be carried out in a planned and systematic fashion (Watts, Miller, Frederickson, Myers, & Hart, 1988). CPD must address the emerging issues and technologies that will affect the practice of the school psychologist in the present and the near future. Since school psychologists have varying degrees of competence in practice domains (Ysseldyke et al., 1997) a variety of levels and types of training must be made available.

School psychologists are ethically bound to engage in CPD activities and are responsible for their own continuing professional development. The most effective learning takes place when school psychologists are actively involved in planning their professional development (Fox, 1992). The construction of an individualized CPD plan is based on a four-step cyclical model that includes (a) setting the context and identifying needs, (b) prioritizing needs, (c) selecting and implementing developmental activities, and (4) evaluation and documenting activities (British Psychological Society Division of Educational and Child Psychology Standing Committee on Continuing Professional Development, 1992, cited in Presland, 1993).

Identifying CPD Needs

Self-assessment is the first step in creating an individualized CPD plan and assists the school psychologist in identifying his or her continuing professional development needs. The school psychologist must initially take into consideration several contexts in which they function. First, one should consider the current role and function, but then review what possible changes in role and function might occur in the future. Plans of the local school or school district for program change or expansion or pending legislative or policy changes that would affect the school psychologist's job duties must be considered. School psychologists should also take into account their overall career plans. They should consider what vision they have for future job changes or administrative advancement or for expanding into new practice areas. Individual reflection and talking with peers, supervisors, and administrators are all useful strategies in assessing the current and future context in which one will work. Consulting contemporary literature in the field will also assist the school psychologist in determining the emerging technologies and practice models that may shape school psychology practice in the future.

Once the context is set then the school psychologist can analyze the demands of the present position as compared to the current level of knowledge and skill. Identify the knowledge and skills needed to ensure effective practice in the changing role or function or to pursue career growth and development. Discrepancies between current knowledge and skills and those of the present position, predicted expansion in job role and function, and desired career development should form the basis of CPD needs.

Two structured methods might be of use to school psychologists in determining their learning needs. The critical incident analysis (Presland, 1993) has the school psychologist identify incidents in the recent past that created difficulties or could have been better handled. To do a critical incident analysis the psychologist writes a description of the incident, and then identifies the knowledge, skills, or attitudes that would be necessary to deal more effectively with the incident in the future. Checklists are another useful method of providing structure for the CPD needs assessment (Fowler & Harrison, 1994; Watts, Miller, Frederickson, Myers, & Hart, 1988). The Professional Development Needs Checklist in Table 1 is created to provide a starting point for identifying training needs. The checklist is based on the major practice domains identified as important for school psychologists (Ysseldike et al., 1997) and rating scales devised by Fowler and Harrison (1994) and Watts et al. (1988). The checklist is not exhaustive, and there is room for the school psychologist to expand on and supplement the items on the checklist to reflect his or her particular work context. To use the checklist, review each item in the practice domains and analyze their level of knowledge and proficiency in their current position and in anticipated or desired future roles.

While at first glance this seems a simple process, many often have difficulty assessing their knowledge

Table 1. Professional development needs assessment checklist

Practice Domain Area	*Current need*	*Future need*
Data-based decision making and accountability		
• Observational skills	____	____
• Interviewing skills	____	____
• Behavioral assessment	____	____
• Cognitive assessment	____	____
• Academic skills assessment	____	____
• Curriculum-Based Measurement	____	____
• Emotional/social/behavior assessment	____	____
• Adaptive behavior assessment	____	____
• Sensory/perceptual/motor skills assessment	____	____
• Vocational assessment	____	____
• Ecological/environmental assessment	____	____
• Organizational/system assessment strategies	____	____
• Staff training needs analysis	____	____
• Strengths assessment strategies	____	____
• Data synthesis and analysis skills	____	____
• Problem identification skills	____	____
• Problem-solving and decision-making strategies	____	____
Interpersonal communication, collaboration, and consultation		
• Listening skills	____	____
• Assertiveness skills	____	____
• Discussion leadership and participation skills	____	____
• Group facilitation skills	____	____
• Conflict resolution and negotiation skills	____	____
• Information giving skills	____	____
• Consultation models	____	____
• Consultation skills	____	____
• Collaboration skills	____	____
• Team building skills	____	____
Effective instruction and development		
• School learning theories	____	____
• Cognitive/learning theories	____	____
• Study skills interventions	____	____
• Reading skills interventions	____	____
• Math skills interventions	____	____
• Written language skills interventions	____	____
• Effective teaching strategies	____	____
• Curriculum development	____	____
• Curriculum modifications	____	____
• Learning environment interventions	____	____
• Alternative instructional activities	____	____
Socialization and development of life competencies		
• Knowledge of affective and social development	____	____
• Development of behavioral, affective, and adaptive goals	____	____
• Social skills training	____	____
• Aggression replacement training	____	____
• Classroom management	____	____
• Behavior management	____	____
• Generalization/transfer strategies	____	____
• Adaptive behavior intervention strategies	____	____
• Individual counseling skills	____	____
• Group counseling skills	____	____

Table 1. (continued)

Practice Domain Area	*Current need*	*Future need*
Student diversity in development, and learning		
• Cultural competence	____	____
• Impact of cultural/racial/ethnic diversity on learning	____	____
• Impact of cultural/racial/ethnic diversity on development	____	____
• Impact of linguistic diversity on learning	____	____
• Impact of linguistic diversity on development	____	____
• Knowledge of educational disabilities	____	____
• Impact of educational disabilities on learning	____	____
• Impact of educational disabilities on development	____	____
School structure, organization, and climate		
• Social systems functioning	____	____
• Schools as organizations	____	____
• Organizational development strategies	____	____
• School improvement strategies	____	____
• School safety strategies	____	____
• School climate	____	____
• Staff training and development skills	____	____
Prevention, wellness promotion, and crisis intervention		
• Knowledge of child development	____	____
• Knowledge of psychopathology	____	____
• Prevention programs that work	____	____
• Health promotion programs that work	____	____
• Design and implementation of prevention/promotion programs	____	____
• Crisis counseling skills	____	____
• Suicide prevention/intervention	____	____
• Crisis intervention and postvention skills	____	____
Home/school/community collaboration		
• Understanding of family structure and development	____	____
• Home/school collaboration strategies	____	____
• Parent education/counseling strategies	____	____
• Community organization skills	____	____
• Community resource development skills	____	____
• Public relations skills	____	____
Research and program evaluation		
• Current education and psychological literature	____	____
• Research design and statistics	____	____
• Translating research into practice	____	____
• Single-case evaluation strategies	____	____
• Program evaluation strategies	____	____
• Evaluation report preparation and presentation	____	____
Legal, ethical practice and professional development		
• Professional ethics	____	____
• Professional practice standards	____	____
• Education law	____	____
• Special education law	____	____
• Mental health law	____	____
• Continuing professional development strategies	____	____
• Workload management	____	____
• Stress management	____	____
• History and foundations of school psychology	____	____

(*Table continues on the following page.*)

Table 1. **(continued)**

Practice Domain Area	*Current need*	*Future need*
Administration/supervision		
• Models of service delivery	____	____
• Leadership skills	____	____
• Policy development, implementation, and evaluation	____	____
• Human resource management skills	____	____
• Clinical supervision skills	____	____
• Management of financial and physical resources	____	____
• Information management	____	____
• Staff development	____	____
Other		
	____	____
	____	____
	____	____
	____	____
	____	____

and skill deficiencies (Cochenour, 1992). Therefore, input from a variety of information sources can be beneficial. Having a supervisor provide a rating for items on the checklist and reviewing past performance appraisals needs can identify training. Input from peers, through informal feedback or completing the rating scale, can be useful. Consumer feedback and program evaluation surveys can also provide data for assessing training needs (Fowler & Harrison, 1994).

Prioritizing Needs

The CPD needs assessment process results in the identification of specific areas of knowledge and skills to be enhanced to improve current job performance, prepare for anticipated changes in role and function, and/or further the school psychologist's career development. The task now is to prioritize the identified needs. In determining priorities the following parameters should be considered:

1. Immediacy: Knowledge and skills necessary to more successfully execute one's current job are usually a higher priority. Needs that relate to anticipated changes in role or function or that further one's career development may have a lower priority. It is important for the school psychologist to have some CPD activities that are future oriented rather than focusing only on immediate training needs;

2. Frequency: CPD needs that have been identified by more than one source of information are likely to have a higher priority;

3. Impact: The training needs that are likely to have the greatest impact on consumers and/or the school organization may have higher priority than knowledge and skills that have a less dramatic impact.

4. Professional guidance: All school psychologists should have a high level of expertise in four practice domains: Data-based decision making and accountability; legal and ethical practices; interpersonal communication, collaboration, and consultation; and student diversity in development and learning (Ysseldike et al., 1997). Deficiencies in these areas should receive priority for CPD. Needs in other practice domains will vary in priority based on the school psychologist's current and future job and career situation.

5. Personal interest: Other things being equal, training needs reflecting greater professional interest to the school psychologist are more likely to be actively pursued.

The end result is a list of training needs in priority order. The next task is to identify and implement activities that would meet the identified learning needs.

Selecting and Implementing Developmental Activities

A variety of learning activities are available to meet CPD needs (Fowler, 1996), many of which are regularly listed in the NASP *Communiqué* and APA *Monitor on Psychology*. Formal courses seminars and conferences are the traditional types of CPD activity. They are appealing in that they are organized, time-limited, and are especially useful when the practitioner needs to develop basic knowledge and skills. There is the risk of taking these activities for granted, however, in that one can fail to utilize the material covered when returning to the work environment. Informal and self-directed learning activities include individually planned study of books, journal articles, or other audio-visual materials. A number of semi-structured topical self-study programs have been developed by NASP and APA and are also available through a variety of private vendors. To gain maximum benefit from informal and self-directed learning activities the resources must be high quality and up-to-date, and the learning objectives of the activity must be congruent with the needs identified in the CPD plan.

A variety of other professional activities that extend beyond the demands of the school psychologist's primary employment may also make a valuable contribution to a CPD program. Peer support groups can be organized to foster learning and problem solving (Zins, Maher, Murphy, & Wess, 1988). Developing and presenting training programs, teaching college/university courses, and conducting research and then publishing can benefit both the school psychologist and the profession. Supervision of interns and professional organization leadership can enhance professional knowledge and skills. School psychologists may have the opportunity to participate in post-graduate supervision as a part of their employment or outside of their primary job setting. Each of these activities must occur in a planned fashion, be congruent with the individual's training needs, and focus on the professional growth of the individual school psychologist.

Distance education provides new options for CPD. Distance education involves learning activities in which the learner is separated from the instructor or educational institution (Miller, Smith, & Tilstone, 1998). This can include formal activities such as an organized course or structured self-study program, or informal activities, such as an on-line forum or professional discussion group. Distance learning activities have been well received because of their convenience for persons who may live some distance from a training site. On-line forums have been found to provide flexibility in time constraints, time for reflection, and opportunities to do further research on topics discussed in the forums (Anderson, 1996).

Once potential CPD activities are identified, it is the responsibility of the school psychologist to determine whether the activity will be appropriate for the training need. A useful method of evaluating the appropriateness of a potential CPD activity is adapted from a series of questions provided by the NASP Continuing Professional Development Program (National Association of School Psychologists, 1996):

1. Will the CPD activity enhance or upgrade professional skills or knowledge base?

2. Will the activity be relevant to the professional practice of school psychology?

3. Will the activity fit into the priorities of my personal plan for CPD?

4. Will the activity extend beyond the ordinary aspects of my current job duties?

5. Will the activity involve active learning strategies such as problem-solving, discussion, case studies, simulations, role playing, and reflection on practice?

6. In the case of formal activities, does the developer of the activity have a reputation for high-quality training activities? Do other school psychologists who have participated in the activity provide positive recommendations?

Affirmative answers for each of these questions for an activity under consideration will increase the likelihood that an identified CPD activity will make a positive contribution to the CPD plan.

Evaluation and Documentation

Evaluation of CPD activities should be an on-going activity. The real impact of continuing professional development is not completing an activity or meeting an external requirement for CPD hours, but whether the activity improves professional competence and furthers career development (Fowler, 1996). By evaluating the effects of participation in CPD activities the school psychologist can increase the likelihood of incorporating new learning into everyday practice. Evaluation also establishes progress toward meeting professional development goals, and information from the evaluation is then another source of data to use in planning future CPD activities. Systematically developed training needs and goals form the basis for effective evaluation activities. Two broad categories of evaluation should be addressed: implementation issues and outcome issues (Cervero, 1988).

Implementation questions assess the process of learning and participation during the activity. Active participation in learning and reflecting on practice are important to effective professional development. Activities that have clear objectives and learning activities consistent with the objectives will be most useful. Active involvement in learning and completing the learning activities as designed will result in maximum benefit from the activity. Most CPD activities have stated objectives. You should ascertain if the objectives of the activity are clear. The components of the program should be consistent with the objectives. You should complete the activities and requirements as outlined by the program. You should be an active participant in the activity.

Outcome questions address changes that result from the CPD activity. Continuing professional development activities that result in changes in knowledge, skills, and attitudes that enhance professional practice and services to consumers are the most beneficial activities. You should assess what was learned and what changes in knowledge, skills, and attitudes have occurred. Assess how you can apply these changes to your practice and what the impact is of any changes in practice. Ensure that what you learned in this activity enhances your career development. Verify that these changes are consistent with your CPD goals and career development plan. While many outcome questions can be answered by personal reflection and analysis, supervisory feedback, peer and consumer evaluation, and review of services documentation may all be useful in evaluating the impact of new learning on practice.

The results of a systematic evaluation will enable school psychologists to effectively manage their continuing professional development. Evaluation becomes a meaningful part of the CPD cycle when evaluation results are used as data in determining learning needs and goals. A CPD activity that does not effectively meet the identified learning goals can be discontinued, and a more effective activity can be substituted. The process of evaluating learning can foster greater involvement in professional development. Evaluating continuing professional development may also have a positive effect on an employee evaluation, as one's supervisor or employer may view this as an indication of the school psychologist's commitment to provide high-quality services.

Professional accountability requires that CPD activities be documented. A record should be kept of all CPD activities including workshops, conferences, and self-study activities. Letters of verification, certificates of completion, and documentation of continuing education credits serve to verify completion of formal activities. A detailed record of learning objectives, activities completed dates and hours of participation, and method of evaluation should be kept for self-directed or informal learning activities. Where CPD activities are required for renewal of licensure or certification, the school psychologist should be familiar with the requirements and the particular method of documenting and reporting compliance required. NASP offers an automated CPD system that allows CPD activities to be tracked as they are completed and submitted. Each year a transcript that provides a summary of CPD activities is sent to participating members.

Staff Development

The NASP *Standards for the Provision of School Psychological Services* (1997b) establishes the obligation of employing agencies to encourage and support CPD for school psychologists. The focus of continuing professional development from the organizational perspective is to build the capacity of individual practitioners to meet the specific needs of the organization (Trotta, 1995) and develop the capacity of the organization as a whole (Ferguson, 1999). Staff development activities can make a valuable contribution to changes in employee behavior and service provision, but are not a substitute for effective leadership, adequate organizational resources, or supervision (Todd, 1987).

Staff development activities often take on a supermarket model where individual school psychologists apply for staff development funds, attend courses on a first-come, first-served basis with little coordination among psychological services team members (Miller, Watts, & Frederickson, 1988). Fox (1992) recommends that staff development begin with an evaluation of individuals' training needs and then take into account the goals and needs of the organization. Planned Professional Development (PPD) (Miller, Watts, & Frederickson, 1988) is one example of combining individualized CPD with organizational needs to develop a more efficient use of staff development resources.

PPD begins with each school psychologist completing an assessment of his or her individual CPD needs by using a checklist such as the one in Table 1. At the same time management staff completes a list of development needs for the school psychological service taking into account external needs and demands on the service. In the case where school psychologists work in teams, each team meets to identify team development needs. The identified needs are then collated on a tally sheet and compared to the priorities and mission of the school psychological services group. From this list staff development priorities are developed through group discussion and negotiation. Priorities are assigned by giving the highest priority to those needs that are common to many school psychologists and have the most congruence with service needs. While there is typically a significant overlap between the CPD needs identified by individual school psychologists and the service needs identified by the school psychology supervisor, it is important to make sure that neither individual nor organizational needs be given exclusive priority. Once priorities are established, each school psychologist then completes an individual CPD plan and the school psychology supervisor develops a service development plan. The plans are implemented and evaluated for effectiveness in meeting the identified training needs.

Professional development can be an important part of planning for organizational or services changes. Organizational change accompanied by effective CPD is more likely to be effective because practitioners then have the requisite knowledge and skills to support changes in organizational structure and services (Frederickson, Miller, & Watts, 1990). Presland (1993) provides a description of a CPD day process (actually occurring over several days) whereby the school district's psychological services unit systematically considers the likely scenarios for the future and how the service might respond to the anticipated changes and demands. School psychologists meet to identify and review the national and state trends and local priorities for the future. They create a series of possible future scenarios and brainstorm a list of individual services that might be offered to clients in the future scenarios. School psychologists as a group then consider the service priorities. Each psychologist identifies his or her individual CPD needs by using a critical incident analysis and CPD checklist, and school psychologists who work in teams develop an intermediate plan describing the prioritized needs of the team. Then a staff development plan is developed for the entire school psychological service, providing relevant choices of CPD activities for individual psychologists.

These are but two examples of how individual CPD plans can be coordinated with the needs of the entire school psychological services group. They offer the benefits of widespread participation, promotion of CPD, and stimulating future thinking. More efficient use can also be made of the limited time and resources available for staff development and CPD.

BEST PRACTICES

1. School psychologists must make a commitment to be lifelong learners, recognizing that CPD is a professional obligation to oneself, the profession, and consumers.

2. Each school psychologist should have an individualized CPD plan.

3. School psychologists should engage in a regular evaluation of their training and continuing professional development needs, taking into account the demands of their current position, anticipated changes in the workplace, and their career development plans. The needs assessment should be on

going and involve supervisors, peers, and/or consumers.

4. Continuing professional development activities should be selected to be consistent with the learning needs and goals that were identified in the needs assessment.

5. A variety of CPD learning activities should be considered. Each activity should be evaluated as to its quality, appropriateness, and potential impact on learning.

6. School psychologists should strive to be active learners. CPD activities that foster involvement in problem-solving, discussion, case studies, and skills practice will be the most effective learning tools.

7. School psychologists must evaluate the implementation and outcomes of CPD activities. Determine if the activity was completed as proposed, whether the learner was actively involved in the learning process, and if the activity met the stated objectives. Identify what was learned and what impact the learning had on practice or career development.

8. Administrators and supervisors of school psychological services should acknowledge the importance of continuing professional development for their staff and provide resources, support, and recognition for participation in effective CPD activities.

9. Administrators and supervisors of school psychological services should involve school psychologists in assessing the training needs of the school psychological services unit and generate staff development activities to enhance the capacity of the entire services unit.

10. School psychologists and administrators must recognize that organizational change and continuing professional development go hand-in-hand. Changes in practice are only possible when professionals have the training necessary to carry out new roles. Continuing professional development activities should be a part of planning for organizational or practice changes.

SUMMARY

Pre-service training in school psychology provides practitioners with an initial base of knowledge and skills for professional practice. Psychology and education continue to rapidly evolve, incorporating innovative technologies, changing expectations, and new information. School psychologists have an ethical obligation to maintain professional competence, and CPD activities are generally required to renew professional licensure or certification. Continuing professional development activities allow the school psychologist to maintain effective practice, respond to changes in the workplace, and prepare for career advancement.

Effective continuing professional development is a continuing activity that involves a four-step process: (a) setting the context and identifying needs, (b) prioritizing needs, (c) selecting and implementing developmental activities, and (d) evaluation and documenting activities. A variety of formal and informal CPD activities are available, and professionals should select those activities that offer active learning strategies such as reflection, discussion, case studies, and skills practice. Evaluating the impact of CPD on knowledge, skills, attitudes, and impact on practice is important. Information from evaluations can be used to update the CPD plan.

Administrators and supervisors of school psychological services have the obligation to encourage and support CPD activities. While the traditional focus of continuing professional development has been on building capacity within individuals, CPD can play an important role in developing the capacity of the entire service unit. Changes in role and function or expansion of services typically require that professionals acquire new knowledge, skills, and/or attitudes. Consequently, professional development activities should be included when planning organizational change or services expansion.

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A two-part series that provides materials and a process for identifying the continuing professional development needs of school psychologists and school psychology services units. The approach is novel and useful for both individual and organizational planning.

14 Best Practices in Technology

William Pfohl and Virginia A. Pfohl
Western Kentucky University

OVERVIEW

A remarkable progression of technological advances has occurred since 1975. From the development of the computer chip to the rapid expansion of the Internet, computer technology has significantly affected everyday life. Homes now feature high tech capabilities in everything from appliances to cable television. Computer networks, distance learning, and word processing have altered professional lives, as have the educational mandates for assistive technology in Individuals with Disabilities Act.

Education has started to embrace technology as a way to facilitate learning and connect students to the larger world. Therefore, it is critical that school psychologists not only acknowledge technology's advantages but master its nuances.

This chapter will review basics of current technology (as of 2001); that is, how to select it, how to maximize its use, and how to maintain professional ethics while doing so (see Table 1).

Currently, school psychologists deal with technology on three fronts: personally, professionally, and educationally.

Professionally and educationally, new opportunities for school psychologists have evolved with access to distance learning courses over the Internet, web-based university course work, or peer-to-peer consultation opportunities (such as those provided by Global School Psychology Network), and psychologists can interact or receive supervision or consultation from others in different states or even countries. Many school psychologists regularly use computers for scoring programs, word processing, and record management. Many of the new test instruments now come with scoring software. In the classroom, students and teachers have begun taking full advantage of the Internet and its capabilities. Handicapped and

Table 1. Guidelines for school psychologists using technology

- Select hardware and software wisely
- Make a commitment to become more computer and technology literate
- Use technology for personal and professional growth
- Keep abreast of new issues regarding legal and ethical use of technology
- Be aware of uses of technology to help students and teachers learn more efficiently
- Review or conduct research on the effectiveness of technology in education
- Provide guidelines to educators and parents on uses and dangers of technology
- Protect and use data responsibly and ethically
- Make sure information gleaned from Internet sources is factual and from a known authoritative source.

disabled students also benefit from touch pads, voice-activated devices, electronic artificial limbs and devices, and electronic voice synthesizers. All students can now use technology for electronic portfolios, testing, data storage, and classroom projects. Teachers now routinely require computer-based assignments, Internet exploration, and software knowledge from their students.

School districts have also gained from Internet access. Students in poorer schools have benefited from state and federal funding and from P. L. 101-407, which was signed in 1988 (Technology Related Assistance Act). E-cost accounts in school districts now provide low-cost Internet access to many districts. Research needs to be done to evaluate the best way to use this new technology to help students learn.

On the down side, with all the rapid advances in technology, computers and software quickly become outdated, leaving the educational community continually playing catch up. Sometimes, few trained personnel are available to help educators and school psychologists understand the complexity of technology and how to use it most effectively. Schools and educators need help with setting up networks of computers, and many teachers do not understand or receive training in technology and its uses in facilitating student learning. All of these innovations potentially place school psychologists at a disadvantage if they do not keep pace with these technological changes and make a commitment to utilize technology in their personal and professional lives.

The U.S. Department of Education in 1996 outlined four technology principles for schools: (a) all teachers will have the training and support they need to help students learn to use new technology, (b) all teachers and students will have modern multimedia computers in the classroom, (c) every classroom will be connected to the Internet, and (d) effective software and on-line–learning resources will be an integral part of every school curriculum. The U.S. Department of Education is currently revising those goals to reflect the need for research on the best ways to use technology in schools and to help prepare children for the intellectual and moral demands of technology (Trotter, 2000). Those goals, or "pillars," will have a large impact on education and indirectly on school psychologists.

Despite the wider availability of and enthusiasm for technological advances, technology has not yet benefited everyone. It was stated in *Education Week* (2001) that "...surveys identify the kinds of students who appear to be losing out when it comes to technology. For a variety of reasons, those students include poor children, minority students, girls, low achievers, students learning to speak English, children with disabilities, and youngsters who live in rural areas" (p.11). All these students are typical of those served by school psychologists. Getting technology's advancements into schools and to all students has proved challenging. (Yearly, *Education Week* publishes a "Technology Counts" review and status for each state, indicating its progress toward providing technological advances to the state's districts.)

WHY TECHNOLOGY?

As our society moves from an industrial/manufacturing focus to a knowledge-based one, it is imperative that people become comfortable with technology for knowledge acquisition, data storage, and connectedness. Education reform movements, a global emphasis on learning, and an international economy have dictated the use of technology for learning, communication, and e-commerce. Technological advances have enhanced time management and business productivity. Hand-held computers or Personal Digital Assistants (PDA) have sold more than 2.5 million units in 3 years (1999–2001). The World Wide Web (abbreviated as WWW in a website domain name) has provided ready access to information that previously was available only at large universities, libraries, and medical centers. Parents and students now have access to much of the same information as school psychologists on various disorders, learning issues, etc. In addition, the capacity to do research and statistical analysis is now available on computers in the school district.

The remainder of the chapter covers these main ideas: selecting hardware and software, assistive technology, the Internet, ethics and technology, and the future of technology and school psychologists.

SELECTING HARDWARE AND SOFTWARE

Unfortunately, or fortunately, technology advances too quickly to adequately illustrate the usefulness of certain products. What is selling today probably will not be selling in two years, and the technology described today probably will radically change in a manner of months. With that in mind, this section will attempt to give an overview of what basic hardware and software are available (as of 2001) and how to choose the appropriate hardware and software for your needs. Of course, many will know all this material, because they are familiar with computers and the Internet and with technology already. However, there are still many who are not yet comfortable with computers and are stymied or are overwhelmed by what these technological words mean and the myriad choices of what to buy.

Hardware

Computer technology will continue to improve rapidly, but some main principles still guide its selection. First you have to define your needs. What do you want the computer for? Do you want it for researching on the Internet? Do you need it to help you score tests? Do you need it for word processing? Then you have to ask yourself how much you are willing to spend. Almost any priced computer will provide adequate word processing for reports or scoring of test protocols. For more advanced capability, such as PowerPoint® presentations, multimedia learning, accessing electronic books, or digitized video or training programs, a more powerful computer will be required.

DESKTOPS, LAPTOPS, AND PDAS

As of 2001, three computer types exist: desktops, laptops, and hand-held computers (PDAs). Intended use, of course, will dictate choice. Presently, desktops and laptops are available in two configurations, IBM-PC and Macintosh (Mac). Microsoft uses IBM-PC. Apple uses Mac. However, as the Internet grows, more and more software will be on the Internet, and more computers will be run from the Internet.

Some basic principles apply in looking for either a desktop or laptop computer. The budget-priced computer, usually purchased for the home for word processing, e-mail, and Internet access, typically offers basic operating software and limited expandability. These computers are optimized for the Internet, and capable of word processing and protocol scoring. A little careful planning and consideration will prevent disappointment and unnecessary spending later on. These low-cost machines are usually best suited for the young school student or for home use. However, as technology advances, so do the capabilities of these machines, and what was state-of-the-art a year ago is now an entry-level machine today.

For a few hundred dollars more you can buy a more technologically advanced desktop that will offer an increased ability to expand or to modify the configuration. However, as has been proven in the marketplace, many consumers prefer to buy a new computer rather than upgrade their existing computer. This is because of compatibility problems with OEM manufacturers and the chips or cards you can buy at a retailer and the cost and complexity of upgrading. Again, the planned use of the computer will determine what capabilities and add-ons are needed. Playing advanced multimedia games, using digital cameras or scanners, all require high capabilities. In this case, the best guideline is to buy the best computer you can afford that has all the capability currently available on the market at the time of purchase. This allows for the most compatibility between the various computer components and will be cheaper in the long run. A larger monitor or LCD screen, more RAM (random-access memory), and larger hard drive are worth serious consideration at the time of purchase.

The vast majority of users use IBM-compatible computers and software. However, because Apple made a marketing choice years ago to virtually give their machines away to schools, many in the education field still use them. Mac is easy to learn, easy to use, and is still the PC of choice for designers and artists. However, for school psychologists, psychologically oriented software for the Mac is still limited, particularly for protocol scoring. If your district uses the Mac platform, then Macs may be a wise choice for ease of use and data and software compatibility, but scoring software issues may still remain.

Laptops are more expensive than desktops but more efficient for school psychologists because we are typically on the move. Weight and durability will be important features. Laptops, depending on features, can be bought in a variety of configurations from the most basic to extremely powerful, equivalent to a desktop. Hardware features, such as CD-ROM or an extra battery, can add significantly to both weight and cost. The laptop needs to be purchased together with a network card that is compatible with the school district.

Major disadvantages to a laptop are short battery life and having to swap various components (floppy disks/CD-ROM, batteries). If this laptop computer is to be used for multimedia presentations, such as PowerPoint®, then more powerful components (e.g., more RAM and larger LCD screen) will be needed. Batteries tend to be a problem, so purchase the best technologically advanced battery available. Laptop companies are working on battery technology constantly. In addition, theft and the risk of dropping the machines are the biggest drawbacks to any laptop. Because they are portable, laptops are stolen at the rate of more than 500,000 per year (2001 data). Leaving a laptop in a car, in an office, or other location can result in losing not only the laptop but also its confidential data. Dropping a laptop can also destroy data by affecting the hard drive access. Regular data backups are essential so that data are not lost. Backup data regularly to a disk or other media device. Make sure that any psychological files on the school's network are also backed up regularly and kept confidential.

The PDA (hand-held computer), as of now, is limited in what it can do. School psychologists may find that a PDA offers a portable, technologically advanced alternative to carrying a large appointment book. Simple word-processing can be done on the PDA, but it is tedious. PDAs are good for notes, memos, and keeping track of expenses and appointments and maybe IEPs or ITPs. There are also add-ons available, such as satellite e-mail. Software programs are currently available for download from the Internet, such as word processing, databases, spreadsheets, and scoring software. This technology will expand and become more reasonable in cost. The PDA technology allows data to be regularly backed up in just a few seconds onto the desktop or laptop computer before the PDA is lost, stolen, or broken.

A surge protector with telephone modem jack protection for both laptops and desktops is essential. The surge protector should include a warranty for full replacement coverage for the computer. Look for a surge protector that will adequately protect your machine. Here, cost is a factor. The better surge protectors cost more and will do a better job. Better yet, there are battery back ups, by APS and others, that do a great job in case of a blackout or a surge. Remember, more expensive is usually better. An ordinary power strip or an inexpensive surge protector, one that costs less than $20, is not adequate.

MODEMS

Modems are devices for connecting either telephone lines or cable to the computer and are available in a wide range of prices and features. Most computers come with a telephone (dial-up) modem and/or a network card combination. Typically telephone modems transmit at a speed compatible with typical copper phone lines. As more fiber optic lines become available, this speed will increase. Cable modems from cable companies are faster than telephone modems as are Digital Subscriber Line (DSL) connections. DSL is available through phone companies and through third-party bundlers. Satellite or wireless Internet access connections will be widely available in the next few years. They are now available for PDAs for a monthly fee. Most technology authorities feel that wireless will become the standard.

PRINTERS, SCANNERS, AND USB PORTS

A wide variety of printer choices are available. Therefore it is important to determine how the printer will be used. There are two kinds of printers: ink jet and laser. Ink jet printers are less expensive initially but are more expensive to run because of the expense of the ink jet cartridges. Ink jets print in color, and the printing is near the laser in quality. Lasers are more expensive initially, especially the color-printing ones, but the laser toners last longer than do ink jet cartridges. Many choose black-and-white lasers because of the expense of the color ones. However, the quality of the printing for lasers is excellent. Laser printers are generally used in offices and in art shops and are best for network sharing or larger volume printing because they are faster and because of the printing quality.

Portable printers, typically ink jets, are adequate for text printing but are expensive per page. They are available for computer formats. Connecting to the district's computer network will provide printer access, minimizing or eliminating altogether the need to buy a stand-alone printer. A scanner is used to copy other documents and then store that document on the computer. Pictures and graphics do require large data storage capacity.

A USB (universal serial bus) hub, attached to the computer, will allow all these hardware options to be connected to the same computer without extra connector ports.

PURCHASING

Hardware can be purchased locally or on the Internet from retailers (IBM, Compaq, etc.) or on the Internet or by phone from the manufacturer (Dell, Gateway, etc.). Although computers bought directly from the manufacturer can be customized for your needs, it may be best to buy from a local brick-and-mortar retailer if you are buying for the first time. But remember that retail personnel may know not much more than you do and may try to push a machine that they have been told to push. (Manufacturer personnel (Dell, Gateway, etc.) over the phone, from experience, are extremely informative and knowledgeable, but only about the brand they sell.) It may be best to take along someone who has knowledge of computers. You should buy a name-brand computer rather than a no-name or store-brand computer.

Buying a computer is not a difficult decision. Most name-brand computers are similar in what they offer and in their warranty. Some computer brands are more reliable than others. *Consumer Reports* and PC magazines reviews are good guides to use.

In summary, here are a few basic guidelines when purchasing your first computer:

1. Decide your use.
2. Decide your price point.
3. Decide which operating system to use (IBM-PC (Microsoft) or Mac (Apple)).
4. Decide what kind of machine you want to buy: desktop or laptop.
5. Decide where you want to buy it: directly from the manufacturer or from a retailer.
6. Understand the company's return policy.

Software

Most software is bundled and is sold with the computer. Most manufacturers use Microsoft software. This makes it very easy to share information with colleagues. Software comes in packages, called suites, or as stand-alone pieces. Suites typically contain a word processor, presentation application, spreadsheet, and database. Some suites offer more advanced features for an additional cost. There are three suites currently available: Microsoft's Office®, Corel's WordPerfect Office®, and IBM's Lotus Suite®. All work well and will handle a school psychologist's needs for writing and storing information.

Scoring software, which makes the school psychologist's life much easier, is widely available for the IBM-PC format. It is less so for Mac.. Site licenses are important if the software is to be used by more than one individual or on more than one computer. Please inquire about this within the school district. A wide variety of school psychology–focused software is available including protocol scoring, test administration, report writers from book and test publishers and from outside vendors. This software needs to be evaluated very carefully, similar to inspecting a new technical manual from a test kit. Ethics require that the psychologist be aware of the strengths, weaknesses, and accuracy of these scoring and/or report writing products. These will be discussed in greater depth in the ethics section.

Powerful statistical packages, such as Statistical Program for the Social Sciences (SPSS), now are user friendly and are available to run on desktop and most laptop computers. This software would handle any research and statistical analyses needs.

Another important software purchase is a utility program suite, usually including anti-virus software, computer diagnostic utility, maintenance, and security utilities. These programs provide the ability to protect, maintain, and service various problems with the computer. Virus detection software is essential for anyone using the Internet or e-mail, and it is *critically* important to keep this software up-to-date (monthly). Some utilities come with computer maintenance software to help the computer run more effectively and efficiently. Windows has some built-in features (Diskscan and Defragmentation), but they are not the most current or sophisticated versions available. Access to the Internet through a DSL or cable modem ("always on" mode) requires an Internet security software program ("firewall") to keep others from accessing the computer and causing damage or stealing private or personal information.

Netscape and Internet Explorer are popular web browsers (explained in detail later) and provide access to the web and are often installed already when you buy your computer. Besides a web browser, other software packages are helpful when using the Internet. For instance, Adobe's Acrobat Reader, free from their website, translates files that are written in PDF (portable document file) format. (Much of NASP's webpage has PDF type files.) The advantage of PDF format is that it cannot be modified except by the author and when printed out it looks exactly like the printed page from which it was taken.

Shareware and freeware are other software that is available to the school psychologist. It is found on the Internet. It is often of excellent quality but is at a lower cost or may be free.

Many commercial software programs in a package are available to faculty/staff/students at the local university bookstore at a substantial savings, typically 25–50% off retail. These are specially priced, complete software packages (not upgrades) direct from the company. Other sources of software are through the Internet (shareware, freeware, and e-commercial software stores), on-line services (such as America Online), retail stores, and local public libraries. Software and hardware purchases take time and knowledge. Find somebody knowledgeable to help if necessary, shop for features, and buy all the hardware together to help ensure compatibility. The key element to obtaining software is *compatibility* with the computer hardware and other software.

ASSISTIVE TECHNOLOGY

Assistive technology is an area of considerable importance to all school psychologists. Under the Individuals with Disabilities Act (IDEA 97), technology is mandated to help enhance learning opportunities for handicapped students. Two elements are defined in IDEA 97 for assistive technology, devices, and services. Devices are equipment related, while services, for example, indicate any modification of environments, adapting assessment procedures, or training others to work with the handicapped child. Pfohl and Craycroft (1999) outline the various principles for using assistive technology with handicapped students. The guidelines state that a child first needs to start with a low-tech modification and then move onto a more high-tech method as individual cases dictate. Modification of a pencil or writing instrument would take precedence over buying a computer; that is, if the child's educational goals can be met by the former.

Using computers or adapting the environment are both forms of assistive technology. Sometimes it is necessary to combine these and modify the device. A simple modification of the computer screen can be done by using Windows' Accessibility Option within the Control Panel. There are many features any child may benefit from in particular. These functions may help a visually impaired, motor impaired, or hearing-impaired child, or a child who has to have the keyboard responsiveness modified owing to motor control problems.

Assistive technology, either devices and/or services, must be outlined in the student's Individualized Education Plan (IEP) (Cunningham & Kelly, 1998). The amount of time, length of services, and specific device to be modified or used need to be indicated. A computer can also be used to collect the evaluation data for IEP goal(s) attainment.

USING THE INTERNET

To use the Internet, it is first necessary to get on-line. This is done through an Internet Service Provider (ISP) by using a computer modem on a telephone connection, a cable, or a DSL line. The modem connects the computer to a server at the ISP computer, which then links to the global network of computers called the Internet. A stand-alone ISP provides basic dial-in service and is different than an online service, which provides many additional features, such as news, shopping, weather, and sports. America Online (AOL) and Microsoft Network are two of the many on-line services. (It may be easier to think of AOL, for instance, as a large magazine with various articles, a *TV Guide* of the Internet. *TV Guide* tells you what's on, gives you opinions and ratings, and what channel the program is on. That's what AOL does. A stand-alone ISP merely gives you, to use the same analogy, a television and a remote. You decide what you want to watch, and then you find the channel the program is on.)

E-mail

A popular on-line activity is sending and receiving e-mail. Mail, even with attached files and photos, can be sent around the world instantly to another person's e-mail address (typically username@the ISP.com). It is fast, cheap, and has changed how people communicate. An entire culture of e-mail "netiquette" and humor has emerged. A single message can be sent to many addresses simultaneously: groups of friends, colleagues, employees, family members.

E-mail has made personal and professional communications easier, yet has its disadvantages also. Users complain of being overwhelmed by the number of e-mail received and the amount of time needed to read and process them. In addition, e-mail is used by commercial companies as an inexpensive method of sending huge quantities of electronic junk mail (or spam). E-mail also has potential ethical consideration, discussed later. Some ISPs allow you to block unwanted e-mail.

Accessing the Internet

Another reason to go on-line is to access the Internet. The Internet is composed of six components. Most people are only familiar with the web. The other five are Gopher, WAIS, ARCHIE, FTP(file transfer protocol), and newsgroups/FAQ (frequently asked questions).

The Internet is actually a collection of computers across the world, mostly government or university based, which store information or data on a vast array of topics. The Internet was primarily developed in the 1950s to facilitate military and university research and communication in case there was a war-related disruption of the normal methods of communication. Since the Internet consists of multiple accesses and computer networks, it is impossible to monitor or control all the facets of the Internet.

A web browser software package is necessary to use the Internet. Microsoft packages their browser, Internet Explorer (IE), with their Windows OS. PC computers with Windows will come with this installed. Netscape and Oasis are two good browser alternatives. Some websites are "tuned" for a particular browser, so that all the site features may not be available for other browsers. The Oasis browser is capable of working on older computers and takes little hard disk space. Netscape is free, and Oasis charges a small fee when it is downloaded.

All sites are given a *code* that identifies them. On the web, this code—known as a Uniform Resource Locator (URL) or address—is entered into the browser to find the desired site. The URLs for the web include the prefix (http://), which tells a host computer to look for a specific web page. If not certain of the specific address (*it must be exact*) then use a search engine to help locate the desired or similar sites. Search engines can use words, phrases, or sentences to find the desired information (e.g., ADHD, stimulant medications). Since each site performs searches differently, read their instructions for searching at that particular site.

With the increase in the commercial trade on the Internet, many sites trying to sell a product use search word descriptors that will cause a search engine to list their site even though it may be totally unrelated to the desired search.

SURFING THE WEB AND THE SCHOOL PSYCHOLOGIST

One popular characteristic of the web results from "hyperlinking" (typically words or URLs highlighted in a different color and underlined), which can send the user to another place on that site, provide additional text, transfer a user to a different or related site, or offer related information without having to know the specific URL (this process is called "surfing"). Saving "bookmarks" within the browser software helps the user return to sites that are most useful and frequently visited.

A downside of surfing the Internet is the possibility of addiction. Many adults, teens, and some children have become addicted to the Internet, spending excessive amounts of time surfing the web. This problem needs to be explored with those who cannot control themselves. The school psychologist must be aware of this new addiction, in addition to alcohol and substance abuse. Mental health treatment may be necessary.

Parents now use the Internet to gather information on various medical, developmental, and mental health conditions, and often bring printouts to the school psychologist's office or teacher's classroom. Unfortunately, information on the web has no quality control: anyone can post information, whether accurate or not. All printouts have the URL on it, so go to the site to verify the information. Check to ensure that the information is current, accurate, and from a reliable source; that it has a knowledgeable author; and that it is statistically valid. Unfortunately, many often believe that since they found it on the web, it must be accurate and authoritative. Never accept the information at face value. However, there are many excellent sites with accurate information that provide a wonderful resource for parents and professionals alike. (See www.nasponline.org for verified links.)

Creating Websites

Most school districts have a website. In addition, some districts' school psychological services (e.g., in Syracuse, N.Y., and in New York City) have built their own websites. A website may provide teachers, parents, or other community members with important information about children's learning and mental health issues. Building a website requires an ISP or school network to access the Internet and also web-development software that will translate information into HTML (hypertext mark-up language) format for posting on the website. The word processing software in the office suites by Microsoft, Corel, and Lotus, mentioned above, can be used for this purpose, but will create only a basic web page. All ISPs offer web page–building capabilities. ISP sites host the website and may offer additional software to make your website a bit more sophisticated. Web page making software within Windows or other software is getting easier to use.

Internet Privacy

Protecting privacy and identity on the Internet has become a significant issue. Identity theft and access of personal/professional information stored on computers is a growing criminal problem. The increasing value of e-commerce makes companies want to identify potential customers and gather personal information on them. Every time a computer connects to a website it sends out an identifying code This information includes the specific user's "user name" and personal ISP address. This information is "harvested" in a variety of ways.

Some websites send *cookies* back, which are short files that identify the user's computer to the selected website. Cookies are often needed to purchase items on the web, so that verification of the customer can be made. These can be deleted after the transaction or they stay on the hard disk until they expire. Cookies may hold a customer's password and username, remember a previous purchase, and even what other sites that computer has visited. On some web pages, there may be more than one company simultaneously using a banner ad or click-on box, or selling various related products, which all use cookies for their files. Cookie management can thus become a problem. Most browsers allow the ability to control cookies by adjusting the software to select from options that range from completely blocking cookies to accepting all of them.

Most individuals want to protect their privacy, but using the Internet can compromise that. There are complicated ways to hide your identity, but otherwise your footprint is left where you go on the Internet. A look at the end of an e-mail message will tell where it came from and how it got there, all of which is public information. Any time software is registered using the Internet, the host site keeps a record of the identifying information. Microsoft has been particularly inefficient with its software security. A "cyber hole" has existed for a long time in their website, and this can allow for registration information to be harvested by outsiders. Be sure to read all privacy policies carefully upon entering any site. Privacy is a significant issue for Internet users. Protecting personal and business information is worth careful consideration.

Shopping on the Internet can cause privacy problems if the shopping site is not secure. When connected to a secure site, a "lock" icon should be visible in the locked position. Credit card information can safely be transmitted. If there is not a lock, then the connection is not secure, and then make a phone call to the person or company you want to do business with.

Computer users who have either a network or cable/DSL always-on connection should install a firewall. This prevents hackers from breaking into the computer and accessing data on the hard drive. Software, commercial or free, is available to set up a protective firewall.

Viruses

One critical issue is viruses. So far Microsoft's software (Word®, Outlook®, and Outlook Express®) is most vulnerable to privacy and virus problems (because of their wide usage) but there have been PDA viruses too. Microsoft Word documents and Outlook sent as e-mail attachments appear to be vulnerable to transporting viruses. Good virus protection software is essential for safe downloading from the Internet or getting e-mail attachments from friends and colleagues.

Web Databases

The Internet contains various databases that store information useful to school psychologists. The newest innovation is the *virtual library*, where full text articles can be found. Universities have established virtual libraries to offer complete books, journal articles, and other archival information on the Internet.

ERIC is the largest educational resource database. AskERIC (www.Askeric.org), will answer most educationally related questions. The 17 ERIC Clearinghouses have their own resources, listed at www.accesseric.org., and ERIC/CASS (Counseling and Student Services Clearinghouse) at www.ericcass.uncg.edu has a site with 12 different topics. ERIC also has a large virtual library website at www.askeric.org/virtual.

Other databases are at various federal government sites (indicated by a .gov ending). The primary master website for all the U.S. Government's websites is www.firstgov.gov. The U.S. Department of Education site, www.ed.gov, is a very inclusive site and is perfect for the general public and educators on child learning–related issues. The National Center for Educational Statistics, www.nces.ed.gov, has every educationally related statistic collected by the government. Mental heath information can be found at www.mentalhealth.org. The National Parent Information Network, http://npin.org, is a full database on issues related to child rearing and child development from birth to teens. Center for Disease Control, www.cdc.gov, has much information on health care and health education particularly mental health, and so does the National Institute of Health, www.nih.gov, and National Institute of Mental Health, www.nimh.nih.gov. These are worthwhile sites that enable users to find information useful for diagnostics, treatment recommendations, and various interventions quickly and efficiently. IDEA 97 (P.L.105-17) law and regulations are found at www.ideapartnerships.org. Education law can be found at www.bazelon.org. Congress and Federal Register information is available at www.thomas.loc.gov.

Other Web Features

Listservs are another service on the Internet. On these sites individuals sign up to receive regular e-mail messages on a specific topic or "thread." Any topic is available and can be found by search engines. The National Association of School Psychologists (NASP) has many Listservs that individuals may join. Listservs are not immediately interactive like a chat room, but an individual can respond to a posting, and everyone can see the response. Some Listservs can generate hundreds of e-mail a day on an active site. Some Listservs offer a digest format so you get all the messages in one e-mail on a regular basis and can read them at your leisure. Active Listservs can produce volumes of e-mail. Be sure to understand how to subscribe and unsubscribe for each one.

Newsgroups, similar to Listservs, are areas where any topic can be accessed. A popular newsgroup site is www.usenet.com, which has hundreds of listings about any topic imaginable. Users sign up and receive the postings through their e-mail service. Some newsgroups now charge fees for access.

The Global School Psychology Network, www.dac.neu.edu/cp/consult, offers access to consultation and peer-to-peer support. This is an innovation to connect school psychologists through the Internet. Distance learning allows individuals to take courses for college credit or continuing professional development, and it is exploding in popularity and usage across the world. Universities are offering college degrees through the Internet. There are many options for learning new techniques or intervention strategies. Many of these opportunities involve the capability to interact with faculty. Cybercounseling and Cyberlearning (Bloom & Walz, 2000) illustrate the potential for the future in using the Internet as a mental health learning tool (www.cybercounsel.uncg.edu). An advanced configured computer will likely be necessary to fully take advantage of these distance learning offerings (Alterkruse & Brew, 2000).

ETHICS AND TECHNOLOGY

Both NASP (National Association of School Psychologists, 2000) and APA (American Psychological Association, 1992) have ethical standards concerning the use of technology. APA also has the *Guidelines for*

Computer-Based Tests and Interpretations (1986) along with *Record Keeping Guidelines* (American Psychological Association, 1993) and *Services by Telephone, Teleconferencing, and the Internet: A Statement by the Ethics Committee of the American Psychological Association* (American Psychological Association Ethics Committee, 1995). The *Standards for Educational and Psychological Testing* (American Educational Research Testing, 1999) includes guidance and cautions about the use of computers in assessment. A book on computer ethics has been written by Johnson (1995). Technology is advancing at such a rapid rate that the reliance on technology has become a significant legal and ethical issue for school psychologists. Papers, books, and monographs on ethics and guidelines are typically out of date by the time they are printed.

McMinn, Buchanan, Ellens, and Ryan (1999) surveyed 1,000 APA members on their technology awareness and practices as related to ethical practice, and they included areas such as the use of telephones, faxes, and computer storage of data. They pointed out concerns about data loss and storage, confidentiality, computerized reports, and technology failure (e.g., the destruction of the computer's hard drive, a floppy disk does not work, phone message machines break down, computer virus). They posed the question about a computer hacker who breaks into a network and gains access to confidential files, and they asked psychologists if they thought this would be an ethical violation. Those concerns are neither clearly covered under existing ethical guidelines nor is it defined how far one must pursue these issues to still remain ethical.

Because psychological reports, computerized testing data results, and IEPs are stored on computer disks or networks, it is the best practice responsibility of the school psychologist to safeguard the confidential material. This can be done by password protection of files, not leaving data disks in the floppy drive, not sharing computers with others, and not e-mailing attached files to others. Ask your school's network director to have a secure space on the school's network where only the school psychologist's accounts are kept, password protected for each school psychologist. The rapid advances in e-mail, faxing, cell phones, etc., have made information instantly available. Data protection must be a priority. Most of what school psychologists do is considered confidential, but these new innovations of technology make information more open and available.

Other areas of potential problems include cell phone conversations that can be electronically monitored. Also, faxes can go to unsecured fax machines or to the wrong number. Confidential information should be sent to the intended individual, who is already standing by the fax machine. Having a fax sit where anyone can see is a potential for breach of confidentiality. An e-mail (which is not secure unless encrypted) may be sent to the wrong person or may have the wrong attachment with confidential information. It is possible to encrypt an e-mail so only the receiver can read it. Otherwise, e-mails are like postcards: anyone can potentially read them. Computers that are left on may have a report or testing data on the screen. A floppy disk left in a computer may have student data on it. These situations become particularly critical if the computer is stolen or hacked into by another individual or if disks are shared for report writing purposes. School psychologists must password-protect their computers and files so that no other individual can access them. Windows allows access to the computer to be blocked through its Access Password protection setup, yet even this may not protect from every circumstance.

An ethical nightmare for school psychologists may be to have their laptop computer stolen from their car or office with confidential information on it. Laptop theft is a chronic problem, and the school psychologist needs to safeguard all information by protecting the computer and its information. Locking cars and offices is an obvious recommendation, as is keeping the computer out of sight. Before a laptop or desktop computer is returned to the school district it should be purged of all confidential data and reports. Leaving this type of information on a computer would likely be considered an ethical and a possible legal issue.

Careful training of school personnel about issues of confidentiality is essential. If computers are used by multiple individuals or on school networks where others have access to any of its files, then there is a high potential for ethical or legal violations.

It is the school psychologist's ethical obligation to use the most current and accurate software available. "Per use" scoring software, such as Behavior Assessment System for Children (BASC), is updated by AGS regularly. Some cognitive tests are now available to administer directly on the computer, as are a variety of personality/behavioral rating software packages.

One final area of concern involves computer-generated reports from report and test scoring software. It is the school psychologist's obligation to ensure the accuracy of such information before it is used. Software packages are not perfect, and many of the first versions contain significant writing and scoring errors. Make sure to use the most current version. Report writers can provide inaccurate information, and scoring programs can be wrong. Report writer programs can also modify the school psychologist's writing style and intent. Just attaching printout information without interpreting it and relating it to the specific student's needs can be viewed as a potential ethical violation. No single data source should be used for diagnosis or placement decisions. Computer-generated regression formulas can be particularly troublesome without further information about the students' history and background.

Computerized IEPs may not be very "individual." Some software developers of these packages do not have individuality in mind. Widespread use of computer-generated IEPs makes them more cookie cutter than individualized. These issues all have the potential to create significant legal or ethical dilemmas for the school psychologist. An alternative is to use any word processing program and save various small files of typical text and explanations of the basic tests often used, and this is still keeping the spirit of the individual child yet will save time typing. Making a template or boilerplate of the specific test and student performance description areas can be done by using any word processor. The tests, results, and descriptions can be updated and modified as new instruments come out rather than having to replace the report writer software package.

All reports, interpretive results, and student files need to be password protected. Careful consideration of confidentiality and protection of the student's identity and records are ethically required. Owing to rapidly changing technology, new ethical and legal issues will continue to surface. School psychologists are required to keep current in all legal and ethical domains, and technology is a very important one.

THE FUTURE OF TECHNOLOGY AND SCHOOL PSYCHOLOGISTS

School psychologists must make a commitment to learn more about technology and its uses for themselves, educators, students, and parents. The "knowledge age" is quickly replacing the "industrial age." The future of technology holds much to help school psychologists perform at a higher level. Because of its importance, "technology" was added to NASP's Blueprint II as one of 11 domains that encompass training and practice (National Association of School Psychologists, 2000).

An expansive use of technology affecting school psychology practice will be "telehealth." This is defined as "the use of telecommunications and information technology to provide access to health assessment, intervention, consultation, supervision, education, and information across distance." (Nichelson, as cited in Reed, McLaughlin, & Milholland, 2000) The Global School Network is an example of this type of service. Rural areas will benefit most from such technology, but with it come the problems of legal and ethical transmission of information and data. The Global School Network has taken appropriate steps to deal with these issues. Telehealth is using video and/or audio technology to teach, supervise, and consult about patient care in the health field, particularly in hard-to-reach locations. Currently, the medical community is struggling with these complex issues, and psychology and education will, too.

Technology is changing as this chapter is being written. Electronic books are being marketed. Global Positioning Devices (which enable us to find where we are within 1 meter from any place on earth) are now under $200. Music is now in a sound chip, not on a CD. Computer games are as realistic as life. Wireless e-mail and Internet services are available in a palm-size computer, meaning no connections. Houses are computer monitored for heat/air conditioning, lights, conservation. Devices are available to perform extraordinary medical procedures that are technology based. The first artificial heart has been implanted. Functional artificial eyes and ears are within possibility. Voice-activated devices are available. The list appears to be endless, only constrained by imagination.

Projecting Into the Future

What are the prospects for the future professionally? How many of the following possibilities will in fact become reality? Medically, instant diagnostic procedures and electronic devices to replace damaged, worn out, or defective body parts will become commonplace. Computers will think and provide feedback when asked for answers. Artificial Intelligence (AI) will provide technology, allowing for interactive assessment with a computer. Virtual reality sites, long known for interactive game playing, will allow real-time visual and auditory counseling and assessment directly affecting school psychology practice. (Several software and hardware devices have already been developed for treating phobias with virtual reality.) On-line or computer based assessments and mental health counseling will be accessible to all. (Vocational assessment (PAR's Self-Directed Search) and personality assessment are already available on line.)

Continuing professional development and supervision will be done by Internet networks. Software will respond to voice activation, eliminating keyboards. Instant interventions will be available through massive databases. Students will need school psychologists to assess what is the best technology learning method for them. Students' desks will be computerized and on-line all the time. Teachers will be able to diagnose and correct student's work quickly and accurately. Parents and educators will want assistance in helping their children learn more efficiently with technology. School psychologists will need to provide the research base for "effective technological education."

All technological devices will be small and portable. There will be no test kits as known now, no bulky daily appointment books, no traveling long distances to assess someone, and no reports to type. Students will sit in front of computers to talk to psychologists or to take a test. Their activity will be monitored by a small camera or matching computer screen. All information will be available on any topic instantly. Few, if any, wires will connect devices because of wireless technology. It is planned that cell phones will be the contact with the e-world with e-mail, Internet services, appointments, video/photo output, plus phone contact. Computers will be all hand held and voice activated, possibly carried as a wrist watch.

These are possibilities. Some may not come to pass. Surely, others not yet imagined will become reality. Psychologists need to stay up-to-date or risk being left behind.

It may be difficult for school psychology training programs to adjust to this new technology. Being computer or technologically illiterate could be a handicapping condition. Most students today have more knowledge of technology than those who instruct them. The availability of technological advances will break out into the have and have nots, a significant issue for education.

The technology revolution has already changed how psychologists work, gather information, relate to others, and are educated. It is a massive challenge for educators to use this technology but not abuse it. School psychologists can play an important part in this revolution, but they will have to think outside the kit to accomplish this.

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AUTHOR NOTE

We wish to thank Lesley Carter at the NASP office and Dr. Garry Walz, Executive Director, ERIC/CASS, and three anonymous reviewers for feedback on this chapter.

15

Trends in the History of School Psychology in the United States

Thomas K. Fagan
University of Memphis

OVERVIEW

This chapter is an update of that appearing in the last edition of *Best Practices*.. This chapter is not a chronological or topical treatise about the history of school psychology such as those appearing in Fagan and Warden (1996), Fagan and Wise (2000), and French (1990). Instead, this chapter expands upon previous work by providing brief descriptions of trends in selected aspects of the history of school psychology over the past century. Historical trend analyses, revealing the stability of some professional developments and the changeability of others, help us understand questions about our present by reflecting on our past. For example, is organizational growth since 1970 unprecedented? Is the literature of school psychology more diverse than in earlier times? Is the practice of school psychology different than it was 50 years ago? Have school psychologists always had children as their primary clients? These and other questions are addressed in this chapter. The discussion is not intended to be comprehensive but rather to provide an overview of some important trends in school psychology, and references for further study.

NUMBER OF SCHOOL PSYCHOLOGISTS

The earliest survey of psychological practitioners serving school settings was undertaken in 1913, and identified only 115 people. Growth in the number of school psychologists was gradual but persistent, and by 1950 there were about 1,000. The post-World War II baby boom, with its growth in school attendance, and the enactment of comprehensive special education laws entailing mandatory psychological services, were dominant forces affecting the rapid growth of practitioners observed after 1950. By 1970 the field had about 5,000 practitioners; current estimates range from 25,000 to 30,000. In recent years, growth can also be attributed to the expansion of settings in which school psychological services are delivered. Estimates of the size of the work force usually include trainers and state government personnel as well as practitioners. However, trainers comprise a very small proportion of the work force, perhaps 3–5%; and government personnel such as state consultants account for less than 1%. The size of the work force at different times is estimated as follows·

1920: 200
1940: 500
1950: 1,000
1960: 3,000
1965: 4,000
1970: 5,000
1975: 8,000
1980: 10,000
1985: 15,000
1990: 22,000
2000: 25,000–30,000

Despite several studies and estimates, no definitive count of the number of school psychologists has been accomplished. Even the term "school psychologist" has eluded consistent definition—adding to problems of whom to count and with whom past and future comparisons should be made. Recent estimates are more accurate than early estimates, but precision is still lacking. Despite problems of accuracy, the trend in upward growth has been significant. Continued growth is expected in the future, but not of the magnitude witnessed in the past 30 years. The number of school psychologists will probably not exceed 30,000–35,000 by 2015. Despite continued growth, the personnel shortages of the 1990s are likely to persist. There has never been a time when school psychologists suffered serious unemployment, and for most of the past century the demand has been greater than the supply of practitioners.

GENDER TRENDS

Public school teaching was a male-dominated field early in the history of American education, but has been dominated by women for more than a century, ranging from 86% (1919–1920) to approximately 70% in recent years. Throughout the twentieth century school psychologists were drawn in large numbers from the ranks of teachers. Even in recent years many school psychologists hold teaching credentials and have teaching experience. Although early survey data are not available, it is known that several women were among the early practitioners of school psychology (e.g., Norma Cutts, Gertrude Hildreth, Leta Hollingworth, Helen Thompson Woolley); that women held several prominent district-level administrative positions in school psychology (e.g., in Chicago, Cincinnati, Cleveland, Detroit), state department of education positions (e.g., New York, Wisconsin), and university positions (e.g., Columbia, Purdue); and comprised one-fourth of the Thayer Conference participants (French, 1988). Division 16-APA data indicated that women accounted for more than 60% of the membership and elected leadership in 1949, and 54% of its 600 members in 1956–1957. The figures appear to have declined to less than 50% by the 1960s, a period when men gained proportionally in leadership positions (Hagin, 1993). A more representative survey by Farling and Hoedt (1971) found an overall female representation of 40%, including 35% of the American Psychological Association (APA) member respondents and 47% of the National Association of School Psychologists (NASP) member respondents. A 1976 survey reported female representation of 45% (Ramage, 1979). By 1982 a NASP survey found women comprising 58% of the membership, and just 3 years later this had grown to 61% of the membership. Surveys in the early 1990s placed the membership representation of women at 65%, and more recently at 70% or more.

Given the representativeness among school psychologists of NASP's membership, the data suggest a substantial increase of females in the field in the past 20 years. The proportion of women in school psychology appears to have varied across the century, from perhaps 30% at some point early in the century to 50% or more during the period 1940–1960, perhaps experiencing a brief proportional decline in the 1960s and 1970s, and then rising to its present high of about 70–75%.

Referring to changes in gender as "the clearest changes in school psychology during the past two decades," Reschly (2000, p. 508) reviewed data on female representation by types of positions held. Female representation was 80% among graduate students in school psychology, 70% among practitioners, and about even with males among training program faculty.

Women's representation among the elected leadership of NASP improved from one-third to two-thirds of the positions during the period 1970–1993, but receded to about 55% in the past several years, in part due to the elimination of elected regional directors. A less discernible trend appears in the data for Division 16's elected leadership, though women held half or more of the positions on several occasions (Fagan, 1993b) and no less than half since 1996. Though regional variations likely exist, there are probably few states where men are in the majority. Despite their proportional advantage, a woman did not serve as editor of a school psychology journal until 1996 when Patti Harrison was appointed to the *School Psychology Review* (vol. 25, no. 1), followed in 1999 by LeAdelle Phelps to *Psychology in the Schools* (vol. 36, no. 3), and in 2001 by Susan Sheridan to *School Psychology Review* (vol. 30, no. 1). Several women have served in associate editorship positions.

The author considers the increase of women in school psychology to be among the more predictable and significant influences on the field for several decades. The proportion of women in school psychology may rise to as high as 80%. Although men have often held leadership positions in the past 30 years, the trend could change dramatically at all levels including state and national associations, academia, editorships, and state education agencies. With increased female presence in the leadership, the future of school psychology will be influenced by their efforts even more than in the past. The trend could be attenuated by recruiting more men into the field and/or by men continuing to be disproportionately successful in obtaining leadership roles. For example, 6 of the 12 most recent NASP presidents have been men.

SERVICE RATIOS

The ratio of school psychologists to children served—the service ratio—has been reported many times in our history. The ratio improved from 1:60,000 in 1934, to 1:36,000 in 1950, to 1:10,500 in 1966, to 1:4,800 in 1974, to 1:2,100 in 1986 (Fagan, 1988). In large and urban school districts the median ratio has improved from 1:18,500 in 1950, to 1:9,000 in 1966, to 1:2,000 in 1991 (Fagan & Schicke, 1994). These figures are consistent with Reschly and Connolly's (1990) report that the ratio for rural school psychologists (1:2,184) was not significantly different from that of urban (1:1,931) or suburban (1:1,892) school psychologists. Practitioners in combined settings (e.g., rural and urban) had significantly worse ratios (1:2,283). According to Reschly (2000), the national mean and median ratios are 1:1,930 and 1:1,750, respectively. Overall, the trend throughout the century has been improved ratios in various settings. Gradual improvements are anticipated for the future, but the NASP (National Association of School Psychologists, 2000) recommended ratio of 1:1,000 will remain an elusive goal.

PRACTICE SETTINGS

School psychologists have worked in several settings throughout history, although their primary identification has been with public and private schools. In the early decades of practice (1890–1920) they also worked in clinics and research bureaus affiliated with charitable agencies, juvenile courts, colleges and universities, and medical settings. Data by setting do not exist, but it is possible that nonschool-setting practitioners outnumbered school-based practitioners in the early years. Prominent early "school psychologists" such as Lightner Witmer and Arnold Gesell worked in the schools but from external agencies. This pattern probably changed in the 1920's, and may be the most significant event in school psychology in the twentieth century (Fagan, 2001).

Division 16-APA (School Psychology) was founded in 1945 and was originally intended for school-based practitioners, not practitioners in other settings. The Division's restrictiveness reflected a conceptualization of school psychology as applied clinical and/or educational psychology, with the school being the primary employment setting. A 1960 Division 16-APA survey found that among 233 respondents, 12 (5%) were from private schools, 11 (5%) from state school systems, 42 (18%) from county school systems, and 168 (72%) from city schools (Results of Questionnaire, 1960).

Setting expansion has been more noticeable since 1980, following a rapid growth of practitioners and increased interest in nonschool and independent practice. The shifting interest appears related to opportunities encouraged by federal legislation for the disabled (e.g., second opinion evaluations), the rapid growth of third-party insurance reimbursements for psychologists, the success of other psychologists in the private sector, increased numbers of school psychologists holding the doctoral degree, and a general maturing of the field of school psychology. Recent survey data indicate the following percentage distribution of employment settings for school psychologists: public school settings (89%), private practice (3.6%), clinic/hospital/other (3.9%), college or university (2.9%), and institutional/residential (0.5%) (Reschly, 1998).

Throughout our history we have maintained school psychology's identity with school settings despite gradual increases in nonschool practice. What does the future hold? There will be an increase in both the number of practice settings and the percent of school psychologists serving nonschool settings, but the schools will continue to be the dominant employment setting. Postsecondary educational setting practice will be more available, as will agency and private practice. The expansion of practice settings depends on the growth in the percent of practitioners holding the doctoral degree, and on the influence of managed care programs on private and clinic practice.

CLIENTELE

The issue of clienthood is complex, but most agree that children and their parents or guardians are the primary clients of school psychologists. School psychologists came into practice in order to directly serve children while working less directly with their teachers and parents. This primary client relationship with school-aged children has been maintained throughout our history. Surveys of practice, research studies on assessment and intervention, and other descriptive reports consistently reveal that school-age children have been the most common clients of the school psychologist. However, growing provision of consultation increases the extent to which teachers and parents are the primary service recipients and clients. School-age children will continue to be the most common direct service recipients, as well as the primary target of indirect services delivered through other recipients. Although the definition of "school-age" has expanded in recent decades to include ages 3–21, some school psychologists provide services to persons outside this age range.

PRACTITIONER SALARIES

Although salary data are practically nonexistent for the first half of the twentieth century, trends can be inferred from archival sources, from limited surveys conducted by state and national associations between 1940 and 1970, and from more comprehensive recent surveys. For example, when the Chicago Public School's Department of Scientific Pedagogy and Child Study was founded in 1899, its Director was paid $2,000/year and his assistant was paid $100/month ($1,200/yr) (Slater, 1980). Between 1915 and 1919, Arnold Gesell was paid $2,000 for his half-time, 9-month position with the state of Connecticut and he was reimbursed for travel, meals, postage, and telephone expenses. Archival sources also reveal that Gertrude Hildreth was paid $1,850 for her full-time, 9-month position in "mental testing" with the Okmulgee, Oklahoma, public schools in 1921. I suspect that the range of salaries in the period 1890–1930 was from $1,000 to $4,000 for full-time practitioners, and that a typical figure was probably $2,000 or less. Among the earliest known surveys is the 1939 state of New York survey (based only on the eight districts having a salary schedule), which found that "the range reported was from $1,400 to $4,000—the median being about $1,600 to $2,800" (Cornell, 1942, p. 25).

The 1954 Thayer Conference survey identified an overall salary range of $3,000–$15,000, with minimum salaries ranging from $3,000 to $4,600 and maximum salaries ranging from $3,600 to $15,000. Benefits and transportation allowances were mentioned (Cutts, 1955). A 1960 Division 16-APA survey ($N = 67$) revealed a median salary in the range of $7,000–$7,999. More than half (55%) were paid $7,000–$8,999. One-third to one-half of all respondents were given full expenses and time for attending professional growth meetings, and an additional one-third received partial expenses (Results of Questionnaire, 1960).

A reworking of the Farling and Hoedt (1971) survey data yielded a median salary in the range of $12,000–$14,999. (The original results (which totaled only 70%) reflected percentages based on the total sample of survey respondents and not just those who answered this question. The percentages were recomputed to reflect a distribution based only on the 70% who had responded (i.e., for a $N = 2{,}197$ instead of 3,138).) Regional data suggested higher salaries in the northeast and west than in the midwest and south (p. 75). The overall upper salary range was significantly greater than the 1960 Division 16 survey, with 84% reporting salaries of $10,000 or more compared to only 8% in the earlier survey. A 1976 survey of Division 16-APA and NASP members revealed the median salary to be in the range of $16,000–$18,999 (Ramage, 1979).

Surveys of the NASP membership reported in its 1982 and 1985 membership directories found the median salary in the range of $22,000–$24,000 and $25,000–$27,000, respectively. An independent survey of practitioners (Smith, 1984) revealed a median salary range of $20,000–$24,999. A 1990 survey of a random sample of NASP members ($N = 1{,}781$) indicated that the median salary was in the range of $35,001–$40,000 (Graden & Curtis, 1991). Reschly and Wilson (1995) reported a median income of $35,800 for practitioners and $44,500 for academicians, but the academicians had a median age six years older. Finally, on the basis of NASP's 1999 membership renewal data ($N = 13{,}813$), Thomas (1999) reported median and average practitioner salaries of $48,000 and $49,089, respectively.

Salaries have increased sharply in the past 30 years following small but persistent increases in the previous 50 years. The large recent increases are reflected in the 1990 data suggesting that 40% of NASP members had salaries of $40,000 or above compared to just 8% 5 years earlier. By 1999, 64% reported salaries of $40,000 or more. Sampling methods and the impact of rapid membership increases associated with NASP's system of national certification might partially explain discrepancies in surveys from 1985 to 1999. In the past decade, NASP membership has grown about 42% (Fagan & Bose, 2000), and the recessionary concerns of the early 1990s were followed by a strong economy.

Salaries by gender have seldom been reported, though a survey by Hall (1949) mentioned that one city had a differential between the salaries paid men and women psychologists; Smith's (1984) data suggest higher salaries for males, but this may have been a result of slightly greater levels of experience and degree attainment (see Table 2, p. 801). Teacher salary schedules, with some adjustments for psychological personnel, were reported in early and more recent surveys. No doubt, benefits also have improved in recent decades in comparison to the first half of the century. Salaries and benefits have improved considerably in the past several decades while the proportion of school psychologists who are women has increased substantially. Thus, the increased presence of women has not been associated with salary or benefits changes by gender.

PREPARATION PROGRAMS

The earliest programs were designed to prepare "clinical" practitioners to provide services in the schools (Fagan, 1999). The programs were not titled specifically "school psychology" until the 1920s, when the first so-titled program was established at New York University. The second formal program appears to be the doctoral program founded at Pennsylvania State University in the late 1930s. By the time of the 1954 Thayer Conference there were 18 programs, including 5 at the doctoral level (Cutts, 1955). Institutions offering training in school psychology grew from 28 in 1954, to 79 in 1964, to 147 in 1974, to 211 in 1984 (Fagan, 1986b). The 1989 edition of the NASP training program directory identified 231 program institutions while the 1998 edition identified 218 program institutions. A leveling of growth in the number of training program institutions has occurred since the early 1980s. Future growth in the number of participating institutions will remain modest. The number is unlikely to exceed 250 and conceivably will decrease. The most predictable increase is in the number of institutions offering a doctoral program in school psychology. Although few in number at present, we can anticipate growth in the number of programs offered by free-standing professional schools of psychology, and by distance learning institutions.

CHARACTERISTICS OF PREPARATION

In the early part of the century, school psychology programs were oriented toward clinical psychology, educational psychology, or a combination thereof. Even the earliest training programs created specifically for school psychologists tended to take these orientations. Perhaps the earliest unambiguous joint orientation of educational and clinical psychology was the University of Illinois program, founded in 1951. Programs have been developed in both education and psychology administrative units with few apparent differences (Fagan & Wise, 2000; Reschly & McMaster-Byer, 1991).

The content of training programs was largely unregulated until the 1960s in what might be called a long period of "diversity of necessity" in which training emerged from programs designed for a variety of educational and psychological personnel. Many of the programs established in that era included traditional core psychology or core education courses with specialty training, including psychoeducational evaluation but with limited emphases on interventions. With the establishment of APA and NCATE/NASP accreditation, the profession entered a period of "restriction for identity" in which very specific standards for preparation were developed to give school psychology training its own identity. Accrediting and credentialing standards also have brought about broader and more specific content in programs. The standards have significantly raised the expectations for entry-level training and have broadened preparation to include various types of assessment and intervention. The current entry-level expectation of the specialist degree or its equivalent is more than twice the expectation published in the original NASP training guidelines of the early 1970s.

However, in raising the expectations to meet job demands and establish a separate training identity in school psychology, nondoctoral programs have been forced to become highly prescriptive. Doctoral programs have tended to follow the broader scientist-practitioner or professional models of preparation.

The past several decades have seen an improved balance of psychology- and education-related content. Very noticeable changes have been the expansion of field experience requirements, including practica and internships, and the infusion of faculty specifically prepared as school psychologists. While a sharp increase in training standards is not expected in the foreseeable future, an upward trend will continue. This may appear first at the doctoral level, where national forces are driving accrediting and credentialing toward the post-doctoral level. Nondoctoral standards are expected to remain similar in total length of preparation (e.g., 60–66 semester hours), though content shifts are anticipated to accommodate concerns in certain areas (e.g., technology and crisis intervention). We should encourage a future of "diversity for maturity," where many forms of preparation will be available in order to better prepare persons for practice in a future of increasing diversity of settings and clients.

CREDENTIALING

Although the New York City Board of Education had provisions for examining and approving school psychological personnel in the 1920s, the earliest state education agency credentials for school psychologists were granted by New York and Pennsylvania in the mid-1930s. Licensing for nonschool practice by state boards of examiners in psychology was initiated in 1945 (Connecticut). By 1960, 15 states licensed psychologists, and all states did so by 1977 (Missouri was the final state). State board of education certification was available in at least 7 states by 1946, 11 states by 1949, 20 states and the District of Columbia by the time of the Thayer Conference in 1954, 24 states (including D.C.) by 1960, 37 states by 1965, 42 states (including D.C.) by 1973, and all states (including D.C.) by 1977 (Brown, Horn, & Lindstrom, 1980; Pryzwansky, 1993). A historical analysis of specific changes in credentialing requirements over the past 65 years has not been undertaken and is beyond the scope of this chapter. However, a discernible trend has appeared requiring greater amounts of graduate education and supervised field experiences, and program approval or accreditation. Teaching credentials and/or experience were not required in the original certification in New York and Pennsylvania, and such requirements have declined from 12 of the 20 states certifying school psychologists at the time of the Thayer Conference to only a few states at present. A current analysis of credentialing requirements appears in Curtis, Hunley, and Prus (1998).

LITERATURE

Until the appearance of the first issue of the *Journal of School Psychology* in 1963, the field had no direct journal outlet for its research and professional literature. Before then, the field relied upon an assortment of journals in psychology and education, including *American Journal of Psychology*, *American Psychologist*, *Journal of Educational Psychology*, *Journal of Consulting Psychology* (now *Journal of Consulting & Clinical Psychology*), *Pedagogical Seminary* (now *Journal of Genetic Psychology*), *Psychological Bulletin*, *Psychological Clinic*, and *Psychological Review* (Fagan, 1986a). Attending the growth of school psychologists since 1960, the growth of school psychology journals was rapid and included the publication of *Psychology in the Schools* in 1964, *School Psychology Digest* (now *School Psychology Review*) in 1972, and *Professional School Psychology* (now *School Psychology Quarterly*) in 1986. Related journals, including those mentioned above, have continued to be important, including *Exceptional Children*, *Journal of Learning Disabilities*, *Journal of Psychoeducational Assessement*, *Professional Psychology: Research & Practice*, and *Special Services in the Schools*, as well as a growing number of journals on specific techniques or disorders. North American school psychologists also subscribe to the *Canadian Journal of School Psychology* and *School Psychology International*, founded in 1985 and 1979, respectively. A few state school psychology associations have published a journal including the *New Jersey Journal of School Psychology* in the 1980s and *The California School Psychologist* in 1996. It is of historical importance to note that the *Journal of School Psychology* was originally published for Ohio school psychologists by the Ohio Department of Education.

National newsletters in the United States specific to school psychology date to the Division of School Psychology's newsletter in 1947 (titled *The School Psychologist* since 1966) and NASP's newsletter in 1969 (titled *Communiqué* since 1972). An international newsletter, *World-Go-Round*, appearing since 1973 predated the founding of the International School Psychology Association in 1982. Newsletters for trainers of school psychologists include *The School Psych Scoop* in 1972 (titled *Trainers' Forum* since 1981) and the Council of Directors of School Psychology Programs' *CDSPP Newsletter* in 1982 (titled *CDSPP Press* since 1990). State association newsletters are common and usually date to the earliest years of these groups (see Fagan, Hensley, & Delugach, 1986). Lesser known newsletters have included those by NASP special interest groups and by other organizations such as the Society for the Study of School Psychology.

Trends in the publication of books about school psychology appear in Fagan (1986a), French (1986), and Whelan and Carlson (1986). These surveys identify the chronological order and significant content changes of books in the field. The earliest book specifically about school psychological services was published by Gertrude Hildreth in 1930 (*Psychological Service for School Problems*). A period followed in which few books were published, including the Thayer Conference proceedings, and then a surge of books appeared beginning in the 1960s. The number and diversity of books published follow the growth pattern for journals during the period 1960 to present. Despite a paucity of school psychology books and journals prior to the 1960s, the field has been served by many literary sources throughout the century (Fagan, Delugach, Mellon, & Schlitt, 1985; Fagan & Warden, 1996; Fagan & Wise, 2000).

ORGANIZATIONS

Organizational entities exclusively serving school psychologists originated with the Division of School Psychologists of the APA (Division 16-APA) established in 1944–1945, which evolved from the Educational Section of the American Association of Applied Psychologists (AAAP), established in 1937. Prior to the existence of these organizations, school psychologists appear to have been members of various groups, including the American Psychological Association (founded in 1892) and its off-shoot the American Association of Clinical Psychologists (founded in 1917), which became the APA Section of Clinical Psychology in 1919, and the Association of Consulting Psychologists (founded in 1930), which evolved into the AAAP. Although some school psychologists were members of the National Education Association, throughout the first half-century most did not belong to any professional organization for psychologists (Fagan, 1993a). Division 16-APA was the only national-level organization for school psychologists until the founding of NASP in 1969. For the past 33 years, both Division 16 and NASP have served as national representatives of school psychology's interests. The founding of the American Psychological Society in 1988 and the American Association of Applied and Preventive Psychology in 1990 represent increasing organizational diversity. Their effect on school psychology remains to be seen, and only a small percentage of school psychologists have become members. Recent information about the history and activities of NASP and Division 16 can be obtained in Fagan, Gorin, and Tharinger (2000). Similar information on the International School Psychology Association appears in Oakland (2000) and the Canadian Association of School Psychologists in Saklofske et al. (2000).

The earliest state association for school psychologists appears to be that founded in Ohio in 1943. The growth of such groups was gradual, and by 1969 there were only 17 state associations, several of which were sections of their respective state psychological associations and affiliates of the APA. Growth in the number of states having separate school psychology associations that affiliated with NASP was rapid in the 1970s and 1980s (Fagan, Hensley, & Delugach, 1986). Every state has an association for school psychologists, and in some states there is both a division for school psychologists within the APA-affiliated state psychology association and a separate NASP-affiliated association. The situation is similar, though more complicated, in Canada and its provinces (see the special issue of *Canadian Journal of School Psychology*, vol. 16, no. 2).

ROLES AND FUNCTIONS

Twentieth-century American education has been characterized by increased segmentation and sorting of children, presumably so that education can intervene in children's lives in more meaningful ways. The sorting function of education has a long tradition dating to the acceptance of compulsory schooling and the employment of experts, including psychologists, to assist in the segmentation of students. The sorting for programmatic interventions has ranged from school lunch programs, Title I, vocational education, advanced placement, or honors classes to several categories of special education. It is common for large school systems today to have numerous specialized programs operating concurrently and overlapping in regular and special education settings.

As part of this growing bureaucratic process, school psychologists have served two primary functions (Fagan & Wise, 2000). The first has been a role of sorter, in which the most visible function has been the psychoeducational assessment of children for placement in special education programs. In earlier decades, this role was predominantly psychometric, although the conceptualization and practice of assessment has broadened in recent decades as a result of legislative and litigational initiatives and shifting problem-solving strategies. School psychologists now work as members of service teams in which a more comprehensive approach to assessment is taken.

A second role, that of repairer, has engaged school psychologists in individual and group interventions. In earlier decades this often involved academic remediation and counseling. More intensive interventions, such as psychotherapy, were often restricted, prohibited, or considered too time consuming or too costly to be done by district-based practitioners. This has changed in the past 35 years as a result of broader training, supervised internships, greater availability of school-based practitioners, and a gradual shifting of administrators' thinking in the direction of serving children's mental health as well as academic needs.

A third role, consultation, could be considered a special case of the repairer role, but it has received so much attention since the 1960s that often it is considered a separate role. There are many instances of consulting in the early literature of our field, but the in-depth consultation characteristic of recent times was only occasionally practiced and seldom researched. All school psychologists occasionally consult with others, but that does not mean they are engaged in consultation. To effectively function in the consultant role, a practitioner now requires specialized preparation and experience.

A fourth role is that of engineer, in which the practitioner works with overall service delivery schemes. This extension of the consultation role to systems analysis and development focuses its assessment, interventions, and preventive strategies at systemic needs, not the needs of individual children, parents, or educators. Until recent times, this role was rarely performed by school psychologists.

Many school psychologists enjoy broader roles and functions than others did in earlier decades. However, most continue to practice the two traditional roles of sorter and repairer, with attendant functions of traditional psychoeducational assessment and one-to-one or group interventions with children (Reschly, 2000). The similarity of roles over time gives a false impression that little has changed in the practice of school psychology. The technical quality and knowledge about assessment and intervention functions (e.g., cognitive and achievement tests, behavior modification, or behavioral consultation) have strengthened the roles of school psychologists. Perhaps the most striking changes have occurred in the context of practice. Just 30 years ago most school psychologists worked without requirements for parent/guardian permission, multidisciplinary teams, annual reviews and Individual Educational Plans, and least restrictive environment placements. The category of learning disability, now the largest area of exceptionality, was just gaining official recognition. Federal laws related to the education of the handicapped (now known as IDEA) were nonexistent, and most special education services were provided in segregated programs. Among the more frequently given tests were the WISC, Stanford-Binet (1960 edition), Illinois Test of Psycholinguistic Abilities, Frostig Developmental Test of Visual Perception, and the Bender Visual-Motor Gestalt Test. The school psychologist typically held a Master's degree, including a practicum, and little or no internship experience. In some settings the school psychologist served in a dual capacity as psychoeducational assessment specialist and coordinator of special education. The school psychologist was a one-person multidisciplinary team. Although some aspects of role and function have persisted, there has been considerable change in our field.

PROBLEM-SOLVING STRATEGIES

Although their approach to the task has varied over the century, school psychologists have been employed to help alleviate the problems of children and their schooling. This discussion of problem-solving approaches focuses only on the sorter and repairer roles—that is, the traditional child study approach to services—and not on systems level and preventive approaches. Early descriptions of practice reveal a problem-solving strategy that focused almost exclusively on the individual child. This strategy sought solutions to children's school problems by studying their identifiable skills and the presumed underlying abilities, traits, or personality characteristics. Problems were considered to rest with the skills and characteristics associated with the child, and the solutions rested with their alteration. Diagnosis and intervention were child-centered. Assessment methods included questionnaires; interviews of the child, parent, or teacher; tests (both standardized and unstandardized, normed and unnormed); inspection of the child's work; school and health histories; and occasional classroom observations. The rapid acceptance of the Binet-Simon intelligence scales and standardized norm-based achievement tests was attributable to the apparent objectivity they brought to an assessment process fraught with varying opinions about classification and degrees of symptomatology. The new tests added scientific respectability to child study by quantifying the extent of a problem and contributing to greater objectivity in classification. Interventions included brief counseling, remediation of academic skills, and an expanding array of instructional and community-based programs in special education.

In part as a result of debates over nature and nurture, as well as the increasing influence of behavioral psychology, the modal problem-solving strategy of school psychologists gradually expanded to more often include the assessment and intervention of persons and factors beyond the individual child. The most obvious shift of focus was from the child to the parents and guardians. For example, for many years it was believed that certain child problems (e.g., autism) were etiologically linked to inadequate parenting (often construed to mean inadequate mothering in an era when societal consensus held that mothers were the primary child caretakers). The focus also expanded to classroom variables, including teacher characteristics and the characteristics of their teaching. As this strategy continued to expand, the notion of problem-solving assessment broadened to the concept of ecological assessment. The child continued to be the focus of study, but only in relation to the study of other variables in the child's environment and especially the child's unique interaction with this environment. Logically, the etiology of children's problems expanded as well. Failure was no longer viewed in terms of child variables but also in terms of other factors, separately or in combination with child variables (e.g., ineffective teaching with children having specific learning deficits).

The methodology continued to include standardized and unstandardized, normed, and unnormed tests. Also included were an array of measures, formal and informal, of peer relationships and sociograms, attitude toward school, parenting, classroom climate and teaching, socioeconomic status, and formalized observations of child and peer behaviors (e.g., event and time sampling). Interventions continued to include the earlier forms, though with greater sophistication in special education programs and diversified therapeutic techniques (e.g., client-centered, rational-emotive therapies, and behavior modification) applied to groups as well as to individuals. Problem solving was still focused on the child, although increasingly school psychologists relied upon indirect interventions such as teacher and parent consultation (see Kehle, Clark, & Jenson, 1993; Sandoval, 1993).

The ecological viewpoint (including reciprocal determinism), with its contention that variables external to the child are worthy of study and intervention, has strongly influenced school psychology for the past three decades (see e.g., Elliott & Witt, 1986; Sheridan & Gutkin, 2000). In recent years, the problem-solving task has shifted some of its focus back to the child in the form of directly measured observable skills and corresponding direct interventions. At least where the "high incidence" problems of children are concerned (e.g., learning disability, educable mental retardation, emotionally and behaviorally disturbed) the shift has been toward disavowing underpinning normative characteristics in favor of direct interventions in observable academic and social behaviors. A long-standing paradigm of assessing skills through underlying supportive characteristics (e.g., intelligence) has shifted to a paradigm of direct assessment of skills and direct remedial instruction irrespective of underlying abilities or traits. The current conceptualizations are identified with an "outcome education" orientation under various names including authentic-, curriculum-, performance-, and portfolio-based assessment. These are variations on earlier themes of criterion-based assessments that have been popular at different times in our history. Other shifts in problem solving have focused on parent and teacher effectiveness, and the child's family constellation. It is now common for school psychologists to consider family variables in both their diagnostic and intervention efforts, and systems have been developed for family assessment and therapy.

In summary, school psychologists have always been identified with one or more problem-solving strategies, the nature of which has shifted over time. Although it is easy to look back with disdain on the practices of earlier eras, earlier practices were influenced as much by broad societal ideologies of the period as by professionals' lofty aspirations. For example, the recent clamor of interest in the family has occurred after an era of governmental, societal, and professional alarm over family deterioration. There was less focus on the family in the 1950s, an era often viewed nostalgically as one of family strength. The irony points to our tendency to draw attention to phenomena for study after the fact. The shifting strategies toward child study are probably less on the cutting edge of practice than they are on the backside of educational and psychological research and on societal acceptance of the changing spheres of child influence. Another example can be seen in the current interest in risk assessment of children as a result of several incidences of school violence perpetrated by students since the early 1990s.

In retrospect, we observe stages of development in problem-solving approaches associated with a broadening recognition and acceptance of the spheres of influence on children. While clear-cut temporal or strategy demarcations cannot be specified, the expansion of spheres generally has been from child, to parents and teachers, to family and school, to community and society. Even though the stages overlap and continue to be observed in the varied practices of professional psychologists, comprehensive assessment and intervention practices have expanded accordingly. Contemporary thinking is conceptualized in the systemic analyses of Bronfenbrenner (1979) and their applications to children of disability (Seligman & Darling, 1997).

Critics of traditional school psychology contend that earlier practice was never based on a problem-solving model. However, all problem-solving models involve assessment and intervention. The traditional model identified the school psychologist primarily with assessment to determine eligibility for interventions most often provided by others via special classrooms and programs. Most traditional school psychologists were, and many still are, not effectively linked to the intervention side of problem solving. However, that does not mean the overall process is outside the realm of problem solving. Employing an assembly line approach to automobile making, instead of having each worker build the entire car, does not make the assembly line approach outside the realm of automobile making. Further, the shift from processing assessment to functional assessment does not mean that the former was outside the realm of a problem-solving model. What has changed is simply the nature of the assessments advocated and the involvement of the school psychologist throughout the assessment and intervention. Some advocates of the "new" problem-solving approaches have chosen to dissociate themselves from the earlier approaches to practice, preferring reform to transition in practice. However, even the current *zeitgeist* is historically linked to earlier approaches known as diagnostic teaching during Witmer's time, and precision teaching, directive teaching, and mastery learning in the last three decades. The recent shifts in problem-solving strategy could benefit services in the long run if they successfully draw greater attention to the importance of interventions and recognize the complementary relationship between child-centered and ecological assessment approaches, and normative-based and criterion-based measurement. The shift toward collaborative inclusion of parents and teachers as peers in the problem-solving process could also have positive implications. Finally, perhaps the school psychologist will earn a more balanced role than in the past, as "repairer" instead of "sorter" of children's problems. For discussions of possible future trends in school psychology see Oakland and Cunningham (1999), *Psychology in the Schools* (vol. 37, no. 1), *School Psychology Review* (vol. 29, no. 4), and Ysseldyke et. al (1997).

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16 Best Practices in System-Level Change

Michael J. Curtis
University of South Florida
Stephanie A. Stollar
Southwest Ohio Special Education
Regional Resource Center

OVERVIEW

Consider several different situations that might very well confront school psychologists:

1. The School Improvement Team establishes a goal of collaborating with parents in promoting positive home-school approaches to discipline.
2. An elementary school wants to implement strategies for more effectively responding to the needs of a growing number of Limited English Proficiency (LEP) students.
3. The School Psychological Services Department is attempting to shift its service delivery model from an emphasis on test and place to one that emphasizes intervention-based problem-solving practices.
4. The district is reexamining policies and procedures in order to comply with the Individuals with Disabilities Education Act Amendments of 1997.

Each of these cases represents a system level issue and each situation is likely to impact school psychologists. On the other hand, in each situation, school psychologists with knowledge and skills in system-level consultation could facilitate change at the classroom, grade, building, or district level.

A number of major developments over the last few years necessitate the involvement and support of school-based professionals who are highly skilled in problem solving and who understand and can facilitate organizational change. Further, there is increasing interest among school psychologists and a growing demand among consumers for services that are based on an intervention-based problem-solving model. In addition, the Individuals with Disabilities Education Act Amendments of 1997 clearly emphasize the "outcomes" of services, ensuring meaningful educational progress for all students with disabilities (Yell, Drasgow, & Ford, 2000) rather than limiting the focus to procedural safeguards, the central trait that characterized prior special education legislation. These major developments require fundamental changes in the way school psychological services are conceptualized, organized, and delivered.

Although system-level change has not been among the services emphasized by many school psychologists, it is an area to which many school psychologists could bring valuable knowledge and expertise. The central foundation of psychology is the understanding of human behavior. A special strength of school psychology is understanding human behavior within the context of schools and educational institutions as they function in relationship to families and the larger community. In other words, school psychologists understand human behavior within the ecology of the school as part of a larger system. Attesting to the importance of expertise in systems change, standards recently adopted by the National Association of School Psychologists (NASP) for both training (National Association of School Psychologists, 2000b) and the provision of school psychological services (National Association of School Psychologists, 2000a) address preparation and practice in system-level influence and change.

BASIC CONSIDERATIONS

There are some circumstances in which a school psychologist might function in the role of a system-level change agent from outside the organization (e.g., the school psychologist would be employed for the specific purpose of delivering system-level consultation). However, in most cases, the school psychologist will be employed by the organization and system consultation will represent only one of a variety of direct and indirect professional service functions. In order to engage effectively in system-level consultation, school psychologists need to call upon three areas of expertise: (a) understanding human behavior from a social systems perspective, (b) ability to use collaborative planning and problem solving procedures, and (c) familiarity with principles for organizational change.

Schools as Social Systems

Although schools usually can be identified by their physical appearance, without students and the personnel who work there, they are very much like any other building. Bricks, mortar, steel beams, and glass do not tell you much about the character of a school. Regardless of physical structure, it is the people within who give it life. Because of its people, a school is a social system. Furthermore, no two schools are functionally alike because of the uniqueness of the individuals who inhabit and affect each of them.

UNDERSTANDING SYSTEMS

System-level intervention and organization development are founded in general systems theory. Initially, the application of systems theory was confined largely to military and industrial settings. The relevance of systems theory to the behavioral sciences did not emerge until the mid 1950s (Miller, 1955). The first systematic effort to use systems theory in schools as a framework for analyzing complex organizational problems and developing solutions did not begin until the early 1960s (Miles, 1963). Much of the early movement to study and improve schools as organizations was stimulated by the work of Schmuck and his colleagues (e.g., Schmuck & Miles, 1971; Schmuck, Runkel, Saturen, Martell, & Derr, 1972).

DEFINING A SYSTEM

It is important to clarify the meaning of the term "system." A system is an orderly combination of parts that interact to produce a desired outcome or product. An automobile engine is an example of a system. It consists of a number of specific parts that interact to produce power and motion. However, in contrast to a living system, an automobile engine is an example of an *inert* system (i.e., as long as the parts continue to function in the same way, the engine should continue to produce power in essentially the same way).

Because it is people who give schools their real meaning, schools are *living* systems. Living systems exist on a continuum beginning with individual cells within a human being and extending all the way to the entire population of the Earth. For the purposes of this chapter, however, a somewhat narrower spectrum is appropriate. For our purposes, *a system is the orderly combination of two or more individuals whose interaction is intended to produce a desired outcome.*

A school is a system because it consists of component parts (e.g., students, teachers, school psychologists, cafeteria workers, parent volunteers, principal) that are organized and interact for the purpose of producing a definable outcome: educated children. As is true of all systems, the school is also part of a larger system, the school district (in systems terminology, the larger system is referred to as a "suprasystem"). Individual classrooms, grade level teams of teachers, local school improvement committees, and intervention assistance teams are examples of inner systems within the school, or "subsystems." Each consists of component parts that interact for the purpose of attaining desired outcomes, and each exists within a larger system.

Reciprocal Influence. A critical feature that differentiates a living system from an inert system is its ability to interact with and to react to its environment, both internally and externally. Because of their capacity to interact with the environment, all living systems are "open systems." Each of the parts of a system influences all of the other parts, as well as the performance of the system as a whole. A change in one part of the system will cause change in other parts of the system. For example, if the building principal is replaced by a new principal, then that change is likely to affect classrooms, students, teachers, the school psychologist, cafeteria workers, and others. Although changes in one component of the system may tend to have more impact than would change in others because of the role played by that particular part (a principal versus one student), *each part*, regardless of role or size, influences the system as a whole to some degree. Also, circumstances may significantly alter the system more than normally would be expected (e.g., a tragedy involving one student that affects everyone in the school). Similarly, changes in the larger surrounding environment (the suprasystem) influence the system, as well as the components (subsystems) within. For example, the enactment of a new district policy on discipline would influence the individual school, as well as its teachers, students, and other personnel to varying degrees.

A systems perspective involves the ability to understand how the various component parts of a system, the system itself, and the surrounding system or environment influence one another. Bandura (1978) suggested viewing the individual child within a systems framework. From the systems or ecological perspective, the child is one element in a larger environment. The child influences and is influenced by various forces in the system of which s/he is a part.

The Capacity of the System to Solve Problems. One of the ways in which systems differ is the extent of their openness to environmental influences, both internal and external. Healthy systems, based on their identified goals, screen environmental information, accepting that which is important, rejecting that which is not, and responding in a manner that is appropriate for the information received. In other words, healthy systems demonstrate the capacity to analyze problems and to solve them in a manner that facilitates the attainment of their goals.

Of course, some systems lack the capacity to solve problems effectively. In some cases, they are not sufficiently open to accept important information. Or they may have been open at an earlier time, but because they did not have the ability to solve problems confronting them, they became closed, somewhat like the ostrich with its head in the sand. The inability to interact with influential forces, internally as well as externally, creates tremendous tension in closed systems. If the tension reaches a high enough level, a crisis occurs that causes some type of change in the system.

Rigidity Elementary School offers one illustration of a closed system. An increasing number of discipline problems are occurring on buses transporting students to and from the school. As a result, several parents have called the school to express their concerns. Initially, the principal tells the parents that these are isolated incidents and that such problems rarely occur. As the problems continue to increase, the principal has the receptionist screen his calls, telling parents that he is in a meeting and will return their calls later. However, the calls are never returned. Angry parents show up at the school, asking to see the principal, but he isn't available. Frustrated and fearful for their children, the parents show up and voice their anger at a meeting of the district board of education. Eventually, the principal is forced to respond to the parents' concerns or is replaced.

On the other end of the continuum, some systems are too open and are unable to screen environmental forces. They essentially accept all input and try to respond to everything, often with the same level of intensity. They are overwhelmed and operate in a constant state of crisis. Everything must be done immediately! Crisis Elementary School serves as an example of this type of system. In this case, every time a parent calls the school to express a concern the principal responds by writing a memorandum to the entire staff or creating a new policy that affects the entire school. As a result, the school is in a constant state of change. In such systems, because there is a lack of stability and continuity, it is exceedingly difficult to set goals, make plans to attain them, and monitor progress. In addition, the energy invested and the attention required to constantly respond to all forces, regardless of importance, is not available to address issues that should be a priority or to pursue the goals of the system.

The primary goal of system-level consultation is to increase the problem-solving capacity of the system so that it can deal with all problems more effectively. In this way, system-level consultation is exactly like one-to-one consultation. While the immediate objective in one-to-one consultation is to help the person requesting assistance solve the problem, the primary objectives are to help that person become more effective in solving similar problems in the future and to become a more effective problem solver in general. In system-level consultation, the system is the consultee. While the immediate goal is to help the system solve a specific problem, the primary goal is to facilitate the development of the system as an effective problem solver. In both cases, although involvement in consultation is likely to result in improved problem solving for the consultee(s), direct training in problem solving methods will result in greater and more immediate skill development (e.g., see Curtis & Metz, 1986; Zins & Ponti, 1996).

Collaborative Planning and Problem Solving

Collaboration serves as the foundation for system-level consultation. *For the purpose of consultation, whether one-to-one or system level, collaboration means two or more people working together, using systematic planning and problem-solving procedures, to achieve desired outcomes.*

The principles of collaborative planning and problem solving that apply to individual consultation are directly relevant to system-level consultation as well. In fact, collaborative one-to-one consultation and system-level consultation are directly parallel in almost every respect. Although we will not discuss one-to-one consultation skills in depth here, it would be helpful to note very briefly some of the fundamental characteristics of effective consultation.

INTERPERSONAL RELATIONSHIPS

Effective consultation is based on mutual respect, trust, and coordinate power status among the participants. The role of the system consultant is to facilitate the efforts of the group to achieve the goals that *the group* has decided upon, in a manner that *the group* chooses. Effective communication skills are essential for a consultant. The ability to listen, ask open-ended questions, paraphrase, and summarize and synthesize information, all within a nonjudgmental climate, are especially important. These skills take on added significance when attempting to facilitate change from *within* the system. Group members are often not very tolerant of a member whose behaviors tend to alter the coordinate power status among members (e.g., by giving unsolicited feedback to the group or to individual members).

PLANNING AND PROBLEM-SOLVING SKILLS

It is essential to remember that consultation is a problem-solving process and that attention to *both* interpersonal skills *and* problem-solving procedures are critical in determining success. Curtis and Van Wagener (1988) demonstrated that despite highly effective interpersonal skills, consultation was not effective in resolving student-related concerns when problem-solving procedures were not employed. Effectiveness in each area is necessary, but insufficient by itself.

Fundamental planning and problem-solving procedures are very similar, with the major difference being one of direction. Whereas planning is intended to achieve a desirable goal, problem solving is intended to alleviate an undesirable condition.

There are hundreds of articles and other works in which authors have discussed planning and/or problem solving. Many models have been proposed that apply such procedures in different ways and incorporate varying numbers of steps or stages. Bergan's (1977) four-step model has received a great deal of attention in the school psychology literature and a number of recent publications present detailed discussions of methods for using Bergan's model (e.g., Sheridan, Kratochwill, & Bergan, 1996). Although the number of steps may vary, most models reflect the inclusion of four major stages implicitly, if not explicitly:

1. Problem/Situation Analysis

2. Goal Identification

3. Strategy Development and Implementation

4. Evaluation

Regardless of the model chosen, effective consultation must include all four of these stages. However, it also should be noted that although such models typically describe a specific sequence of stages, actual problem solving during individual consultation often does not proceed in such a mechanical, lockstep manner. Rather, movement back and forth among the stages is common. Nevertheless, the general sequence of stages typically should occur as described and *all* stages must be included. For a comprehensive review of the consultation literature and a discussion of the core characteristics of different consultation models, including interpersonal relationships, as well as problem solving, the reader is referred to Gutkin and Curtis (1999).

Principles for Organizational Change

Since applications of system-level analysis and organization development to schools received little if any attention until the mid-1960s, the area remains relatively new. Yet, a considerable amount of organizational change research and conceptual literature regarding other social systems has been published. This work, when combined with the research and conceptual literature generated specific to educational settings, provides a very useful knowledge base to guide system-level consultation in schools. Recently, a number of researchers and authors, including Senge (e.g., see Senge, 1990; Senge, Kleiner, Roberts, Ross, & Smith, 1994) and Fullan (e.g., see Fullan, 1995, 1997; Fullan & Hargreaves, 1996) have made significant contributions to the organizational change literature.

BEST PRACTICES

Best practices in system-level consultation can be illustrated through an examination of key concepts and practices that are addressed in the organizational change literature. Furthermore, it is important to remember throughout the following discussion that system-level consultation is a problem-solving process and, therefore, directly parallels the steps of individual problem solving. Key concepts and principles for organizational change through systems consultation will be identified and discussed.

Planning for Change

A definition of organization development provides fundamental principles to guide the practice of system consultation. Although a number of definitions have been suggested, for our purposes *organization development is the planned and sustained effort to bring about system-level improvement through self-analytic and problem-solving methods.* System-level change must be planned and pursued in a systematic manner over time. It does not just happen. Furthermore, it is not an event or activity, but an on-going process that should never end. The definition presented above also emphasizes the critical point discussed earlier (i.e., the primary goal of system consultation is for the system to become more effective in solving all problems). Solving a specific, precipitating problem should be considered only a short-term goal. However, it typically is the precipitating problem that provides an opportunity to engage in a longer, sustained effort for system-level change. In this way, system consultation parallels individual consultation. A specific concern causes someone to seek assistance. But the resultant involvement in consultation is intended to increase the general problem-solving skills of the consultee, as well as to address the precipitating concern.

UNIQUENESS OF EACH SYSTEM

The same intervention would not be employed to address different concerns relating to different students. The intervention would have to fit the specific problem in each situation. Yet, in system consultation, there sometimes seems to be a tendency to use the same change strategies, regardless of the specific characteristics and needs of different systems.

System consultation is built upon careful analysis of the organization and the resulting plan that is designed to address the unique needs and characteristics of a particular system. Two types of procedures that are useful at this stage include *diagnostic evaluation* and *input evaluation.* Diagnostic evaluation is helpful for identifying the needs of the system through multiple sources. It might be conceptualized as a multifactored evaluation at the system level. Formal techniques such as surveys and questionnaires may be combined with informal measures such as interviews and observations to provide a complete understanding of the organization. Needs assessments are particularly useful not only for gathering information about the organization, but for involving all members of the system in the change process (Curtis & Metz, 1986).

Once the needs of the system have been clearly identified, the resources available that may be relevant to addressing those needs are examined through input evaluation. The skills and resources of the staff, support of parents and district personnel, and financial resources are examples of factors to be considered. When focusing on problems, it is sometimes easy to overlook the importance of acknowledging and building upon the existing strengths, resources, and successes of the system. Attitudinal factors may be just as important as tangible resources. The planning stage of system-level consultation is directly parallel to the intent of the problem analysis stage of the problem-solving process used in individual consultation. A thorough understanding of all relevant factors, both negative and positive, must be developed before moving forward.

COMMITMENT OF KEY PERSONNEL

Because successful change requires a large investment of staff time and effort, voluntary participation is desired. In addition, the high level of involvement necessitates the commitment of key personnel. At the very least, such persons cannot be obstacles if the change effort is to succeed.

Gatekeepers. It is essential to identify all "gatekeepers" before any aspect of the change process is initiated, including diagnostic evaluation. The role of the gatekeeper is characterized by decision-making power, ability to distribute resources, and authority within the system. They must not only give sanction for the change process, but it is hoped provide support and fully participate with all other members of the system. Sometimes, just the nonparticipation of the gatekeeper can be a negative factor to be considered. The role of gatekeeper is most commonly held by personnel such as the principal or superintendent. However, staff in less obviously powerful positions, such as the school secretary or specific teachers, can be very influential in determining the success or failure of change efforts.

If a person in a gatekeeping position is identified as being an obstacle to desired change, the school psychologist can use a structured problem-solving process, such as that described below, to reduce or eliminate the negative influence of the individual. Any identified obstacle to change or organizational problem should be addressed in a planned and systematic manner, using a structured problem-solving process. The discussion below includes an illustration of using such a process in this way.

Involvement of all Stakeholders. In addition to securing the commitment of gatekeepers, all stakeholders in the system must participate in every stage of the change process. This is a fundamental principle for organizational change. Stakeholders are all members of the system who will be affected by the change. Decisions about system-level change in schools are often made at the administrative level. Failure to involve important stakeholders, such as classroom teachers, will negatively impact the organizational change effort.

Many efforts to implement intervention assistance programs in schools have violated this fundamental rule. Typically, the discussions, planning, and even implementation of changes have involved seemingly everyone, *but* classroom teachers. Principals, special education personnel, school psychologists, and other related services professionals then "inform" teachers about the new procedures. Confusion and frustration result among these well-intentioned change agents when teachers are not included early in the process. Common sense suggests that classroom teachers are *the* primary stakeholders among the professional staff in a school who will be affected by the implementation changes, such as intervention assistance programs.

Parents represent another critical group of stakeholders. Parents are often glaringly absent from system-level change efforts in schools. The Individuals with Disabilities Education Act Amendments of 1997 mandate and describe how parents are to be meaningfully involved in the education of children with disabilities. However, the involvement of parents in all school change initiatives would seem self-evident from the perspective of the organizational change literature. It also should be apparent that, where possible and appropriate, students should be involved in systems change. The literature is very clear: *All* stakeholders should be meaningfully involved in every aspect of system-level change efforts, beginning with initial discussions regarding *potential* change and continuing through implementation.

Demonstrating Change Strategies. Because an organizational change effort must be planned and sustained over time, it is important that key personnel and other stakeholders have a realistic understanding

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of what may be involved. Otherwise, the absence of immediate change (an unrealistic goal to begin with) could lead to the loss of commitment and investment in the process. Therefore, it may be helpful to demonstrate change methods so the group can gain familiarity with such procedures, as well as experience success in addressing real concerns. Curtis and Metz (1986) taught an entire school staff group problem-solving techniques as a means for demonstrating organizational change methods and for securing their commitment to the change process. After having the participants identify real concerns and establish related goals for change, group problem-solving skills were taught and used to develop strategies to address the concerns and achieve the identified goals. Using this strategy served to teach the problem-solving skills necessary for planned change, while addressing real concerns that were considered important by the participants.

Goal Identification

Based on diagnostic and input evaluations, specific desirable outcomes should be identified. It is critical that these goals reflect information derived during the problem analysis procedures. The goals will determine the types of system-level intervention to be considered, and specifically those chosen for implementation. It is at this stage that groups often discover that they have identified several different, although related goals. Refinement of goals and the selection of one goal at a time to pursue through specific change strategies will enhance the likelihood that the group will be successful in its efforts.

It is also important to establish *realistic, concrete, system-level goals*, especially during the early stages of an organizational change effort. When seeking organizational change, it is easy to get lost in an "all-or-nothing" view of the system. The school psychologist can assist the group in breaking larger goals into more reasonable steps according to which change can be measured. Even a small initial change has the potential to create a ripple effect that leads to more significant change later. For example, one school psychologist began by regularly scheduling only 15 minutes each week to talk with the building principal about building-level issues. After a few weeks of such talks, an interesting journal article related to one of the issues discussed would occasionally be given to the principal. Over time, the school psychologist came to be viewed by the principal as a source of information and expertise regarding a broader range of issues, particularly as they pertained to organizational concerns.

Strategy Development and Implementation

System-level consultation involves ongoing activities to address long-term goals. Intervention is not conceptualized as a single event. Therefore, it is helpful to identify a staff member who will serve as the on-site facilitator of the change process. Although school psychologists may be well suited for this role, the itinerant nature of some school psychology assignments may make involvement in the on-going monitoring of change difficult. In system change efforts, it is easy for individuals to get lost in the details of their daily routines. It is essential that someone monitor system-level initiatives and, when necessary, refocus the group on the change process.

The overall plan for change may involve intervention methods that target the cognitive, affective, and/or structural components of the organization. Interventions that address cognitive aspects would include the activities that are instructional such as training staff in new technology or practice. Affective interventions are those that address interpersonal relationships among the staff. Examples include training in communication and effective listening skills. Structural interventions focus on the way the organization is put together and its relationship to the various subsystems and suprasystems. Because these components are somewhat interrelated, system-level intervention plans that address all three are usually most effective. The intervention activities should be carefully selected to achieve aspects of the overall goals of the system.

TEACHING PLANNING AND PROBLEM-SOLVING PROCEDURES

As noted above, the development of problem-solving skills by the system is the primary goal of system-level consultation. The most effective method for achieving this goal is through direct instruction, practice, and follow-up. The school psychologist could be a valuable resource in providing training to as many of the major stakeholders in the system as possible. The effectiveness of the system will increase as the proportion of its members who are effective problem solvers increases.

It may be necessary to begin by training only a few members; however, providing all members with training in problem-solving skills should still be maintained as an eventual goal. For example, in working at the building level, it very often is necessary to begin by training a specific group such as the local school improvement team. Once the group has been trained, had an opportunity to practice using collaborative planning and problem solving procedures, and then refined their use of such methods through feedback, discussion, and perhaps further training, they can become a vehicle for planning training for the remainder of the staff. However, improving the problem-solving skills of any members of the system represents progress, even if training the entire staff is not possible. Any improvement should be recognized as a positive outcome of system change efforts.

Although many different approaches to problem solving might be used, the model described below has been used by the authors to train a wide range of individuals and groups in a variety of settings, including schools, agencies, and professional organizations. Each of the steps is explained briefly. Then an example is provided which is based on the actual work of a school-based intervention assistance team.

A MODEL FOR COLLABORATIVE PLANNING AND PROBLEM SOLVING

The effectiveness of this model is dependent on conscientious adherence to following the steps described in sequential order, thoroughly completing one step before moving on to the next. For ease of presentation, each step is explained in terms of *problem-solving* procedures. However, the same steps may be used to achieve goals identified for the purpose of *planning*.

1. *Describe the problem or concern as concretely and as specifically as possible. Once the problem has been defined, identify the desired outcome of the problem-solving efforts, again using concrete, descriptive terms*: Often, what initially is thought to be a problem, once analyzed, is recognized to be several distinct, although perhaps related problems. Record all problems identified. Although all of them may not be dealt with during a particular session, once recorded, they can be addressed during subsequent sessions. Identify the specific problem that will be addressed *first*. Then, define the desired outcome that would result from resolution of only that specific problem. It is essential that all members of the problem-solving team have the same understanding of the problem to be addressed and of the desired outcome.

2. *Analyze the specific problem chosen in terms of factors that might help in addressing it (resources) and factors that serve as obstacles to its resolution:* Using a brainstorming process, all members of the group participate in generating a list of resources and obstacles. The use of only concise statements should be encouraged. It is essential that ideas are not discussed, evaluated, or even clarified at this point. The intent is to produce as much information as possible by involving all members of the group in a free flow of ideas. Record only enough about each idea to allow clarification by its originator after brainstorming is completed. This should be recognized as an "idea" stage. At this point, there would have been no decisions made regarding actions to be carried out.

3. *Select one obstacle that is significant in terms of its hindrance to resolving the specific problem identified in Step 1:* The obstacle selected should be viewed as only the first obstacle to be addressed, not as the only one. It is best to avoid trying to identify the most important obstacle to reduce concerns relating to ownership associated with who generated specific ideas. However, the obstacle chosen should be one for which there is shared interest across the group. If the group were inexperienced in using structured problem-solving procedures, it also would be desirable to select an obstacle for which the group has a reasonable chance of generating possible solutions. Experiencing success is important in developing group skills and confidence. Other important obstacles can be noted for future attention.

4. *Focusing only on the one obstacle selected in Step 3, brainstorm resources and activities that might be used to reduce or eliminate that specific obstacle:* The list of resources identified in Step 2 serves only as a stimulus for the generation of ideas.

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Again, because a brainstorming process is being used, the intent is to generate and record as many ideas as possible. Specific ideas can be clarified after brainstorming is complete. Remind participants that this is only an *idea* stage and that *no decisions have been made* regarding actual action plans.

5. *Design a concrete plan of action that reflects accountability for completion (i.e., who, what, when):* If possible, several action plans should be developed to address the same obstacle. In that way, if one plan is not carried out, or does not attain the desired results, the identified obstacle still may be reduced or eliminated through other actions. Each plan should clearly identify *who* (by name or position) is responsible for carrying out *what* specific activity (include as much detail as possible) by *what* date. Avoid stating any aspect of a plan in general terms; the greater the detail provided in a plan, the greater the likelihood that it will be carried out as intended and on time. Sometimes, it is desirable to try out an action plan on a limited scale before proceeding with full implementation. If the person identified as being responsible for the action plan is not a member of the group developing the plan, it is necessary to create an action plan that identifies a member of the group *who* will contact that individual about willingness to take responsibility for the action plan (what), and the date by which contact is to be made (when).

6. *Establish a procedure for follow-up and review:* Consider interim reporting dates and procedures to check on the progress of an action plan, rather than waiting until the deadline for its conclusion. This stage also is used to evaluate the effectiveness of action plans and for modifying them or even recycling to an earlier stage in the process.

Example of the Six-Step Problem-Solving Model. In order to clarify the problem-solving process within the limits of the space available, the following example includes only selected entries for some steps.

Original Concern: The teachers are not using the Intervention Assistance Team (IAT) as a means for helping them respond to the special needs of their students. Our goal is to increase from 10 to 40% of the teachers using the IAT by the end of the school year.

- *Step 1. Statement of Problem/Concern:* Many of the staff are unaware of the benefits they can receive from working with the Intervention Assistance Team.

- *Step 2. Analyze problem, identifying resources and obstacles to resolution.*

Resources	Obstacles
A. Some staff has used the process and realized benefits.	A. Intervention assistance is viewed as a barrier to testing.
B. Resource people have worked with other schools where process is working well.	B. We have not communicated very effectively with our staff about process and results. We haven't communicated very effectively with our staff about the intervention assistance process and the results.

- *Step 3. Select one obstacle.*

- *Step 4. Brainstorm ideas to reduce or eliminate selected obstacle:*
  A. Conduct an in-service on the benefits.
  B. Report regularly during staff meetings.
  C. Disseminate written reports on process and results.

- *Step 5. Design concrete plans of action (who, what, when):*
  - **Action Plan 1:** Sue, Anne, and Mr. Allen will make a presentation at the staff meeting on March 10 about the process and how it is intended to be a resource for teachers.
  - **Action Plan 2:** Jim will contact several of the teachers who have used the process and ask if they will report during the staff meeting on March 10 on the benefits they experienced. He will contact them by March 3.

- **Action Plan 3:** Mr. Allen will contact Jan Smith to ask if she will make a brief presentation during our staff meeting on March 10 regarding the benefits being realized in some other buildings. He will contact her by March 3.

- *Step 6. Establish procedures for follow-up and review:* The Intervention Assistance Team will meet March 3 at 3:00 PM to review the plans for the inservice program and to make any final arrangements.

Evaluation

As with individual consultation or a student-focused intervention effort, frequent evaluation is essential for determining progress and for identifying the need for adjustments to the plan. It is essential that progress in system-level change efforts is also monitored and evaluated on an ongoing basis. Measuring progress is necessary at multiple levels, beginning with the lowest levels of the structured problem-solving process and progressing through the major goals of the organization.

1. How successfully was a specific action plan implemented and how effective was it in achieving the desired results (Step 5 in the Problem-Solving Process(e.g., presentations to the staff by several teachers who have been helped by the Intervention Assistance Team))?

2. How effective was a group of related action plans in reducing or eliminating the targeted obstacle (Step 3 (e.g., We have not communicated very effectively with our staff about the intervention assistance process and the results))?

3. As more obstacles are targeted and action plans developed and implemented, to what extent has the identified problem been reduced or resolved or the identified goal been achieved (Step 1 (e.g., Many of the staff are unaware of the benefits they can receive from working with the Intervention Assistance Team))?

4. To what extent has a system-level goal been achieved (e.g., Our goal is to increase from 10% to 40% of the teachers using the IAT by the end of the school year.)

Evaluation at each level enables you to determine the extent to which the problem-solving strategy has been successful. When necessary, the strategy can be modified or replaced by a new action plan. When successful, a new obstacle can be targeted or a new problem or goal identified.

SUMMARY

Major forces affecting education in general, services for students with disabilities, and school psychological services have created a tremendous need for professionals with knowledge and skills in system-level consultation and organizational change. Many opportunities exist for school psychologists to respond to that need by expanding their roles to include this area of professional expertise. By building on current competencies, school psychologists can increase participation in system-level change efforts by viewing behavior from a systems perspective, using collaborative planning and problem solving procedures, and pursuing strategies that are based in principles for organizational change. Any planned change effort, no matter how small, can be an important step toward improved services for students.

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Following on this well-known author's earlier work, *Change Forces*, this publication examines the pitfalls and opportunities of school-based change strategies. The numerous illustrations, based on actual change efforts in which the author has been involved, make this a particularly helpful work for school-based teams.

Senge, P. (1990). *The fifth discipline.* New York: Doubleday.

In this publication, the author introduces and advances the concept of the "learning organization," (i.e., the organization that is continuously engaged in developing the capacity both to respond to current opportunities and problems and to anticipate and prepare for the future). While well known organizational principles still serve as the cornerstone for much of this work, an intriguing and stimulating new way to think about organizations systems is offered.

Senge, P. (1999). *The dance of change: Challenges to sustaining momentum in learning organizations.* New York: Currency/Doubleday.

Much like *The Fifth Discipline Fieldbook*, Senge has written a helpful "how-to" book describing activities and strategies to use in addressing specific types of problems relating to change efforts. The discussion is organized according to three major areas: The Challenge of Initiating Change, The Challenge of Sustaining Transformation, and The Challenge of Redesigning and Rethinking, with activities relating to specific types of problems included under each (e.g., Not Enough Time Under Initiating Change).

Senge, P. M., Kleiner, A., Roberts, C., Ross, R. B., & Smith, B. J. (1994). *The fifth discipline fieldbook.* New York: Doubleday.
This publication was intended as a follow-up piece to *The Fifth Discipline* to, according to the authors, answer the question, "What do I do on Monday morning?" Numerous pragmatic strategies for systems change are discussed, using a wide range of differing organizations as illustrations.

17

Best Practices in Facilitating School Reform, Organizational Change, and Strategic Planning

Howard M. Knoff
University of South Florida

OVERVIEW

Over at least the past decade, virtually every state and school district in the country has worked in the area of comprehensive school reform in order to improve the academic and social-behavioral outcomes of all students. Guided by our eight national education goals (National Education Goals Panel, 1999), these schools have attempted to integrate all of their systems—organization, instruction, professional development, and management—into a common, articulated, and accountable process leading to substantive and meaningful results. In doing this, four fundamental questions continue to be asked:

1. How do schools design and deliver *an academic program* that successfully addresses the needs of all students while improving their rate of learning such that they progress through the grade levels and graduate from high school with functional and extended skills; and how do we create a functional assessment and evaluation system that is curriculum-based and that is used to design effective instruction and develop strategic interventions (when needed) that have a high probability of success?

2. How do schools design and deliver *a social-behavioral program* that increases all students' interpersonal, problem-solving, and conflict resolution (i.e., social) skills; how do we increase students' academic engagement and their academic task persistence and confidence; and how do we create a functional assessment and evaluation system that is setting-based and that is used to develop and evaluate interventions (when needed) that have a high probability of success?

3. How do we increase *the involvement of parents* in supporting and reinforcing the education of all students; how do we design and deliver an integrated or unified educational system that does not differentiate regular education and special education; and how do we facilitate *real* interagency and community cooperation, integration, and streamlining of services?

4. Finally, how do we accomplish all of this through a strategic planning process that incorporates *a data management system* that guides decision making and provides routine formative and summative evaluations, and how do we institutionalize this process such that it becomes self-generating, self-replicating, and responsive to current and future student needs?

All of these needs and questions are of great national importance. This is clear given a number of reports issued over the past few years and the current status of our nation's school reform movement. Relative to the latter, our country's schools and students have not made great progress on many of the National Education Goals (National Education Goals Panel, 1999), our current educational system still largely dichotomizes regular and special education, and our special education numbers continue to climb (U.S.

Department of Education., 1999), and many special education students still are not included in our state and national academic assessment programs (National Center on Educational Outcomes, 1997).

Relative to the former, the impact of race and poverty, especially on disabled and at-risk students, cannot be ignored. Indeed, the National Council on Disability's (1993) report, *Meeting the Unique Needs of Minorities with Disabilities*, is still relevant today in its statement that, "The present education system is overloaded and confused. Poverty, racism, cultural differences, the dissolution of families, and the weakening of home influences are among the contributing social factors that challenge the schools. When these variables are combined with low self-esteem, peer pressure, lack of self-discipline, and inadequate role models, students do not arrive at school ready to learn. To exacerbate the situation, those who are prepared to learn are often subjected to inappropriate curricula, inadequate support services, and, in some instances, a hostile school environment" (pg. 19). A separate report, *Mapping Out the National Assessment of Title 1: The Interim Report* (U.S. Department of Education, 1996), indicated that students in high-poverty schools lost ground academically relative to students in other schools between assessments in 1984 and 1992. Indeed, according to the report, state data show that by fourth grade there was already a large gap in reading proficiency between students in high-poverty schools and those in low poverty schools. These students were considered at-risk for academic difficulties, for possible special education services, and potentially for school dropout.

In the final analysis, it is apparent that schools still need an effective school reform blueprint that is driven by organizational change and strategic planning processes along with empirically demonstrated procedures and interventions. Related to this, they also need an effective training and leadership development process in order for real change (and prevention) to occur for all of our students. Finally, they need systematic ways of collecting data to analyze and determine the efficacy of their implementation processes. Critically, this blueprint must also be responsive to changes in the reauthorization of IDEA, including the mandate for parent involvement, to the need for more functional assessment in the classroom leading to more efficacious services (rather than labels), and to a goal of serving more special education students in the regular settings (Fuchs & Fuchs, 1992; Reschly & Ysseldyke, 1995). Finally, this blueprint must be based on proven, replicable models that involve exemplary practice and demonstrated outcomes.

Relative to low-performing schools, this blueprint also should be responsive to some "lessons already learned." One set of lessons was publicized by the Annie E. Casey Foundation (1995) based on a 5-year, five community New Futures grant program to prepare disadvantaged urban youth for successful lives as adults. After investing an average of $10 million in each community over 5 years, the foundation evaluated the implementation and planned change process such that future programs could be more efficient on the road to effectiveness. In the end, the key lesson was that, in the low-income communities involved, service-system and institutional-change initiatives, by themselves, could not transform poor educational, school, and health outcomes for vulnerable children and families. That is, institutional change was not enough; the comprehensive change process required home school and community collaboration that included social-capital and other economic-development initiatives that targeted entire low-income neighborhoods. Among the other lessons described in this report were:

1. Comprehensive reforms are very difficult and involve, at times, the path of most resistance. True integration at the service-delivery level requires collective decision making across budgeting, staffing, and resource allocation; good communication and clear program planning, purpose, design, and expectations; attention to issues of power, race, and ethnicity; and time, trust, risk-taking, and perseverance.

2. Comprehensive reform requires advanced and ongoing efforts to build constituencies that are committed to long-term efforts, to strategic planning, and to the development of systems that can sustain the change process over time and through changes in leadership.
3. Comprehensive reform is not for every community, nor is every community at a readiness level to begin this process. Comprehensive reform efforts must be planned, public, realistic, and shared; and they need core leadership, management systems and

skills, conviction and momentum, and credibility and legitimacy to have any hope of success.

4. Comprehensive reform requires a blend of outside technical assistance and local commitment, leadership, planning, funding, and evaluation that results in local ownership and self-renewal.

5. Comprehensive reform requires repair, revision, reassessment, and recommitment. Significant modification should not be interpreted as a sign of failure.

6. Comprehensive reform often requires the development of entirely new systems and ways of being. The alteration of existing systems or the implementation of new systems built alongside old systems often will not lead to real change and enduring outcomes.

Organizational Change: Initial Perspectives

In the context of school reform (or any other planned change process), it is important to note that organizational change and strategic planning should be natural, necessary, and ongoing components of a healthy, evolving school. Moreover, while schools need to focus predominantly on student outcomes, organizational change and strategic planning processes help them to recognize that some seemingly child-specific problems are actually building, systems, or community problems that must be addressed at multiple levels using a problem-solving process resulting in systematic, multifaceted intervention, and substantive change. Finally, while organizational change and strategic planning processes are generally guided by a representative group of school staff (including, often, parents and community leaders) who work under the guidance of one or two facilitators, these facilitators are chosen more for their leadership skills than because they come from a specific professional area.

It is also important to note that, until recently, individual schools have rarely engaged in systematic organizational development and strategic planning processes (see the Annotated Bibliography for examples of schools who have; also Knoff & Batsche, 1995). And yet, while many states have mandated annual "School Improvement Plans" generated by school-based strategic planning teams, few schools have been systematically trained and supervised in these processes, nor have they developed the team and consensus-building capacities needed for success. Commenting on these and other school reform initiatives, Sarason (1990) predicted their continued failure because:

1. School leaders do not understand that schools exist coequally to facilitate the development and growth of both students and educational personnel.

2. School personnel do not want to confront and change the existing power relationships among administration, teachers, other staff, and parents such that true collaboration and shared decision making can exist.

3. Those "facilitating" the reform process do not understand their schools and/or the reform process in the context of their histories or larger social systems. Rather than just looking for the causes and solutions of "system problems," they should also be generating the resources needed to reconceptualize and redesign new systems.

4. School leaders do not understand that, left unchecked, schools will respond to reform in ways that minimize the effort needed and the degree of real change required. This avoidance response, however, is directly correlated with the degree of powerlessness felt by those most responsible for the change.

5. Finally, many schools and communities still do not understand how issues of racial, cultural, and socio-economic status and composition influence the schooling process. Others do not know how to initiate and maintain discussions of these issues such that diversity becomes a characteristic of strength that results in a community working together to raise and educate all of its children.

In the end, successful school reform requires training and experience in the change process. And without this and a guided organizational change and strategic planning process that involves parents, community leaders, *and* school personnel, district- or building-based change will be extremely difficult to accomplish. The first step in this process is that all of these parties need to learn *how* to collaborate and strategically plan for school-based reform. Critically, this learning may take from 3 to 5 years, it may require an outside consultant or a full-time staff facilitator, and it may be especially challenging because the school will be implementing the change process at the same time that its management or advisory team is learning it. But, it must be done, it must be focused on increasing students' social and academic learning and development, and school psychologists must be involved—potentially as the primary facilitators of the process. By way of summary, Louis (1986) has argued that

> under the right circumstances, change orchestrated at the school level has a significant chance of making a difference. . . . Our best bet for improving school lies not with fine-tuning state reforms (although some of these are, of course, necessary) but with stimulating individual schools to change and providing them with appropriate assistance. A number of studies suggest that both process assistance (help in guiding the school's progress through change programs) and specialized training (to provide staff with new skills) are needed to implement significant change (p.34).

BASIC CONSIDERATIONS

To coordinate and facilitate a school-based organizational change and strategic planning process, school psychologists must understand and have expertise in three primary areas: (a) the problem-solving and planning cycles of a school from an organizational perspective, (b) the characteristics of an operating school district from a systemic perspective, and (c) the steps in a strategic planning process. Each of these will be discussed in detail below.

Planning and Problem-Solving From a District Perspective

Problem solving is needed and occurs in virtually every area of our personal and professional lives. Similarly, problem solving is used in virtually every area of business, politics, education, human services, and civic planning. Although some use more or fewer stages, problem solving, typically, is separated into four sequential stages: problem identification, problem analysis, intervention, and evaluation. Using an organizational context:

1. The *problem identification stage* involves actions that help (a) to operationally define the referred problem, whether of an individual nature or an organizational nature; (b) to specify the goals of the consultation, problem solving, and/or planning process; and (c) to begin to verify the existence and extent of the problem and to generate hypotheses to explain why the problem is occurring.

2. The *problem analysis stage* involves actions whereby (a) the referred and operationalized problem is fully investigated in all of its ecological, organizational, situational, and behavioral contexts; (b) the hypotheses generated to explain the problem are assessed and confirmed or rejected; and (c) interventions related to the confirmed hypotheses are identified and developed while their potential acceptability, social validity, treatment integrity, and generalizability are concurrently evaluated.

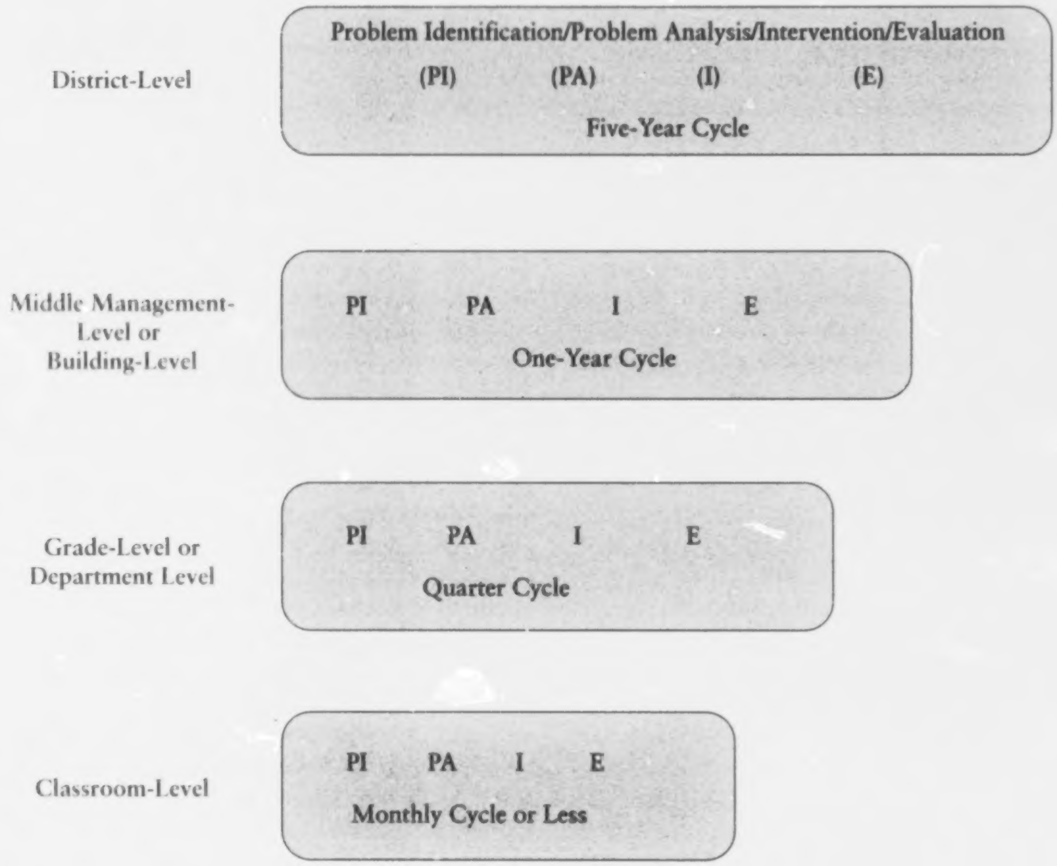
3. The *intervention stage* involves actions that include (a) the development of the organization and its members' capacity to implement the intervention plan; (b) the identification of criteria to determine whether the intervention has been successful or not, the method(s) to evaluate this success, and an estimate of the amount of time needed to begin to see this success; (c) the actual implementation of the intervention plan; and (d) the determination as to whether revisions or adaptations of the intervention are necessary to increase its effectiveness or to respond to unexpected outcomes.

4. Finally, the *evaluation stage* determines (a) formatively and summatively, whether the goals of the problem-solving process and the intervention have been met; (b) how the intervention's implementation process was qualitatively perceived; (c) how long the intervention plan should be continued and if it needs to be changed, faded out, or discontinued as a function of continuing success; and (d) to what degree the organization and its members can

independently continue the intervention and whether ongoing consultation and problem solving is needed.

Significantly, individual schools attempting school reform must recognize that different parts of the school system use the same problem solving process, yet they use this process in different time cycles (see Figure 1). This not only makes school-based reform a more complex process, especially as the school district is larger and more bureaucratic, but it also reinforces the need for strategic planning. As an example, most schools do their budgeting and grade-level planning in 1 year, action-planning cycles. Often, this begins by January or February at the latest, and it is completed no later than March when the school must submit its budget to an assistant or area superintendent or a business manager. From a school reform perspective, it is important to recognize the symbiotic relationship between school improvement goals and the budgeting process. While the ideal situation would have the goals determining how much of the total budget to dedicate to instruction and student progress, reality dictates that a lower than desired percent of a school's budget goes to school reform and that schools must prioritize their goals within the limited dollars provided. Another reality that must be integrated into the school reform process is that individual schools typically budget themselves on an annual basis. While businesses can set 5-year goals and budget accordingly, the annual nature of each school's budget and *the lack of significant carry-over funds* makes long-term goal setting and attainment very difficult.

Figure 1. Problem solving within school districs as correlated with time and planning cycles


District-Level
Problem Identification/Problem Analysis/Intervention/Evaluation
(PI) (PA) (I) (E)
Five-Year Cycle
Middle Management-Level or Building-Level
PI PA I E
One-Year Cycle
Grade-Level or Department Level
PI PA I E
Quarter Cycle
Classroom-Level
PI PA I E
Monthly Cycle or Less

Within a school, most grade-level teams (e.g., in an elementary school) or departments (e.g., in a high school) can respond to specific problems within a month or two (so long as they do not involve major financial expenditures), and they can determine the success of their problem solving often within 3–5 months. Moreover, most *teachers* in a classroom can respond to a situation, through effective problem solving, in a matter of a week or two, and then see the impact of their efforts within a month's time. The point here is that the closer one gets to the classroom level, the faster the problem-solving or action-planning cycle can occur. At a building level, problems are typically more complex, they often have budget, scheduling, or personnel implications, and thus, the problem solving often requires many months and sometimes can only be addressed across school years.

At a *district*-level, problem solving and action planning typically occurs in 3- to 7-year cycles. Essentially, this means that school-based problems that require district-level change have to wait until the planning, budgeting, and implementation cycle phases in, and that some problems may be addressed by the district only if those problems occur across a significant number of schools. As an example, a school may find that the newly adopted reading series is not sensitive to the background and culture of its lower SES and at-risk students. Since most districts purchase their basic academic textbook series (e.g., in reading, math, spelling) in, at least, 5- to 7-year cycles, this problem is likely to persist until the next series is adopted, unless the school chooses to expend a great deal of time and money to review and buy a new series earlier. Even from a policy level, most school districts take from 2 to 4 years to implement any new policy into practice if it involves acceptance, dissemination, training, and execution.

To summarize this section on planning and problem solving, please refer to Figure 1, which diagrammatically shows the problem-solving process across the multiple time cycles that exist within a school district. From an organizational perspective, the strategic sequencing and integration of these cycles is critical, as is the district's capacity to streamline some of these cycles at times, while recognizing that not all change can occur immediately or simultaneously. Finally, the importance of the evaluation stage must be emphasized once again. If the desired outcomes of problem solving are not occurring, then all four stages must be reviewed. More specifically, the wrong problem may have been identified, it may have been analyzed incorrectly, the wrong interventions may have been chosen or they may have been implemented without treatment integrity, or the evaluation methods, themselves, may be providing false or negative readings when acceptable results actually have occurred.

Characteristics of an Operating School District

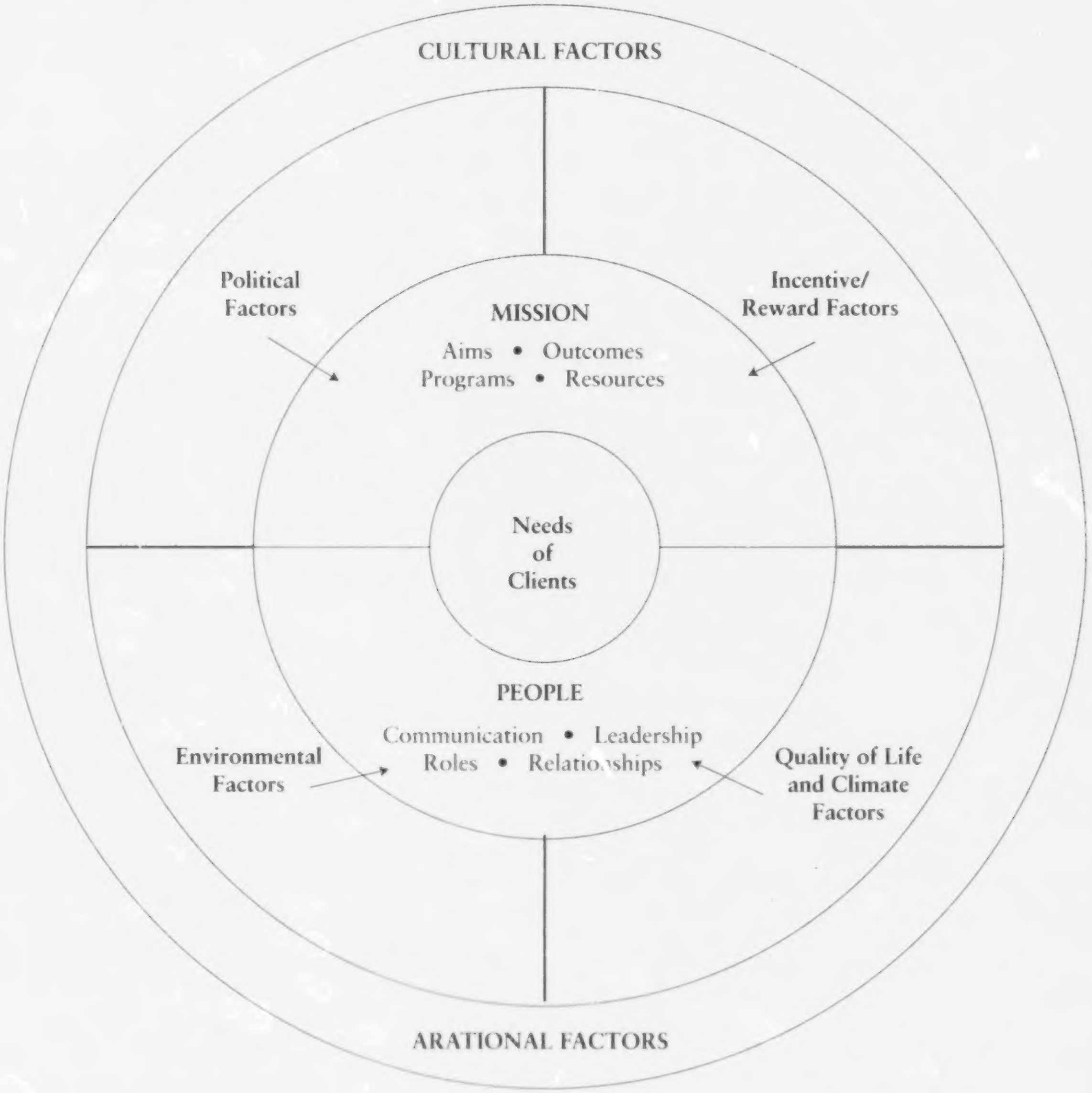
To facilitate organizational change and do strategic planning, school psychologists must understand the characteristics and interdependencies within an operating school district. With this and an understanding of the developmental and critical-events history of the school district, certain processes (such as specific power relationships, how decisions are made and by whom, how particular people were appointed to their current positions) become more comprehensible, and others that are critical to the change process become more predictable. In the end, however, organizational change is not always a systematic, cause-and-effect process. Clearly, it is always easier for a strong leader to facilitate change when entering a system in crisis, or near-crisis, or a system that is frustrated with chronic inertia and mismanagement. Similarly, a well-developed strategic plan can be thwarted by a crisis event (e.g., a community's rejection of a bond issue, the death of an important staff person, or a natural crisis such as a hurricane or a flood) that may completely derail the process for many years.

Below, the characteristics of an operating school district will be briefly described (see Figure 2). These have been adapted from Egan (1985), and they are organized in four major systems: the Receiving System, the Performance System, the Human Resources and People System, and the Pervasive System Variables. In total, the school system must be viewed as an ecological system that includes the home and the community, and it must be recognized that this ecological system both creates and identifies its own problems *and* has the resources and capacity for innovation to solve these problems.

RECEIVING SYSTEM

Refocusing our perspective back onto the school building, the receiving system is composed of our primary clients, the school children whom we serve, and

Figure 2. A whole-system perspective for organizational assessment, strategic planning and systems change


CULTURAL FACTORS
Political Factors
Incentive/ Reward Factors
MISSION
Aims • Outcomes
Programs • Resources
Needs of Clients
PEOPLE
Communication • Leadership
Roles • Relationships
Environmental Factors
Quality of Life and Climate Factors
ARATIONAL FACTORS

Adapted with permission from Egan, G. (1985).

our primary goal is to create and maintain an operating system that maximizes their social, emotional, behavioral, and academic development and progress. Critically, however, the organizational change and strategic planning process may identify secondary goals and interventions that involve other clients, such as families and younger preschool students that preventively help to support our primary goals. In fact, given the pervasive impact of poverty, the still-high number of teenaged and single parents, the increasing number of students who are not socially and academically prepared when they enter school, and the number of young children from homes where both parents work—often within months of a child's birth—the inclusion of families and younger siblings in the school's Receiving System makes eminent sense.

In analyzing the Receiving System, the answers to a number of questions, beyond *Who are our primary or targeted clients?* become critical. These questions include: *What are our clients' needs? What do* they *identify as their own needs? What are their prescribed versus* felt *needs? What are their goals?* and *How attainable do they feel that these goals are?* From a strategic planning perspective, the answers to many of these questions will require both a client needs assessment and, at least, a demographic, social, and historical analysis of a cross-section of the homes and communities served by the school. From an advocacy perspective, we need to make sure that we are integrating and reflecting the *real* needs, goals, and desires of our clients into our organizational change process, and that we are not choosing only those goals that are convenient or expedient. Significantly, advocates often are not members of the groups they advocate for and, thus, sometimes they never fully understand these groups, their subtle needs, and reasons behind those needs. Comer (1994) reflects this when he said:

> A child develops a strong emotional bond to competent caretakers—usually parents—that enables them to help that child develop. . . in social, psychological, emotional, moral, linguistic, and cognitive areas [that] are critical for future academic learning. The attitudes, values, and behaviors of the family and its social network strongly affect such development. A child whose development meshes with the mainstream values encountered at school will be prepared to achieve at the level of his or her ability. In addition, the meshing of home and school fosters development: When a child's social skills are considered appropriate by the teacher, they elicit positive reactions. A bond develops between the child and teacher, who can now join in supporting the overall development of the child (p. 2).

The goals in all of this is are (a) to identify those client groups most related to the social and academic progress of the students in the school; (b) to analyze their strengths, weaknesses, resources, and limitations; (c) to understand home, community, and other historical and environmental characteristics that influence student progress; (d) to determine how client and environmental strengths and assets positively impact student progress; and especially (e) to assess *why* client and environmental weaknesses exist such that school reform goals can target resolution and growth. In doing this, primary, secondary, and tertiary prevention interventions likely will emerge. Ultimately, however, the organizational change process should focus on primary and secondary interventions at a system and building level, and on providing educational personnel the skills and resources to implement the tertiary prevention interventions at a building and classroom level.

PERFORMANCE SYSTEM

The Performance System involves the organizational and strategic planning aspects of a building's system that help it to reach its student-focused academic and social, emotional, and behavioral goals. Minimally, there are five elements to this system: the building's mission; the major aims or goals of the building that are consistent with and operationalized from the mission; the tasks, programs, or activities that will lead to the attainment of the aims; the materials and resources needed by the school's personnel to implement the programs or activities; and the specific outcomes that each program will accomplish that, again, should cumulatively lead to the realization of the building's overall goals and the accomplishment of its mission.

A building's mission statement should identify the purpose for the organization's existence, its targeted "consumers," its desired outcomes, and how, within a particular philosophical framework, those outcomes will be attained. This mission statement should be brief, specific, and clear, but given its importance to the strategic planning process, it should not sacrifice length for its ability to communicate and motivate. Indeed, the mission statement should be that statement that everyone in the organization points to as their defining purpose, and it should be the crystallizing perspective that integrates the Performance System with the Receiving System. As such, in the strategic planning process, the (re)development of the mission statement most often follows the organizational and needs assessment and situational and environmental analysis steps. Below are two mission statement examples, one from a school district and the other from a school building. Note that the building statement is somewhat more specific and tailored to its distinct population and circumstances.

1. The General County School District is dedicated to enabling students to develop their individual capabilities for a lifetime of learning and for responsible, productive participation in a diverse and changing world.

2. The Specific Elementary School will prepare each child to meet life's challenges by providing the best possible learning environment with the most effective methods and resources to insure that each child will develop academically, socially, and aesthetically.

Often underlying the mission statement are a number of visions, philosophies, or beliefs agreed upon by the school as essential to everyone's acceptance of the mission statement. One set of beliefs, adapted from the Council of Administrators of Special Education's (1992) report, *A Future Agenda for Special Education: Creating a Unified Education System*, is as follows:

1. Everyone is responsible for the education of all students.

2. A unified system of education integrating regular and special education must prevail.

3. Accountability for all students is guaranteed through a system of unified outcomes.

4. All educators are prepared to educate all students.

5. Funding must support a unified system.

6. Site-based management is key.

7. A unified system requires a unified, yet flexible, curriculum that is shared among and with educators and that has specified outcomes.

8. Staff development encourages problem-solving, shared resources, and continuous improvement.

9. All families feel welcome and are involved in the schooling of their child.

10. All students and staff have access to and training in appropriate technology.

Clearly, the development of the mission statement and the generation of the goals that operationalize the mission statement will come more easily to the staff that embraces many or all of these beliefs.

As noted above, once the mission statement is developed, the building then should identify the major aims, programs, needed resources, and specific outcomes that will ensure building success. Often it makes sense to develop 3- or 5-year plans, specifying the major aims and outcomes only, and then a series of 1-year plans that, if implemented, will sequentially lead to the 3- or 5-year outcomes. The generation of these plans will be discussed later in the strategic planning section of this chapter. For now, it is important to emphasize the importance of identifying *a priori* outcomes that are relevant, observable, and measurable such that formative evaluations can be applied periodically to determine whether the programs chosen are meeting their intermediate goals or if problem solving and special intervention for these programs, due to less than successful outcomes, are needed.

HUMAN RESOURCES AND PEOPLE SYSTEM

This System involves all of the human resources within a school that are needed to implement the programs and accomplish the work that the school has identified in its strategic plan. Significantly, however, "human resources" also includes the personnel and process management of the individuals and teams needed such that the "whole is greater than the sum of its parts." To this end, then, schools must evaluate and coordinate their staff people, their respective roles and responsibilities, their relationships both to each other and to the school's goals and programs, and the process variables (e.g., leadership, communication, decision-making approaches) that make it all work together. Much of this, moreover, should be driven by the specific programs identified within the Performance System such that the entire school operating system becomes more integrated and planful.

To expand briefly, the important components of the Human Resources and People System are as follows:

1. The necessary *people* in the system are identified by the client, program, and management needs of the building. Client needs typically involve both the educational and mental health needs of the students and related family needs. This may necessitate both a strong cadre of primary educators and an equally strong support network of support professionals—educational specialists in particular curricular areas and health and mental health specialists such as school psychologists, social workers, school counselors, and nurse practitioners. While program needs may involve both educational and mental health specialists, the point here is that the programs identified in the Performance System must be staffed by individuals who can best meet the specified outcomes. At times, this will require hiring staff with special backgrounds and/or credentials. At other times, this will necessitate the training of existing staff such that the program(s) have the highest probability of success. Finally, the management needs of the building are also critical to the overall success of the building. These include personnel management and supervision, office and data management, transportation and food management, and grounds and security management. Once again, personnel to address the building's management needs could overlap with those dedicated to client and program needs. The issue, ultimately, becomes how these individuals are organized and to what degree they are integrated and satisfied with the level of integration required.

2. As noted above, the specification of building, program, and activity *roles and responsibilities* is important to determine whether the knowledge and skills needed for success exist in the building. Two points are especially important here. First, relative to the academic and social progress of students, the professional *title* of the individual providing an intervention, service, or program is basically irrelevant. What is relevant is that the individual has the ability to provide the desired skills. More specifically, and as an example, if a building decides that an anger control group is needed for certain students, it matters little whether that is done by a counselor, a clinical social worker, a school psychologist, or a teacher with special training so long as an appropriately trained professional fulfills the need. The second point is that staff training should always have three outcomes: the mastery of knowledge, the translation of that knowledge into functional skill, and the attainment of a level of staff confidence such that both the knowledge and skill levels are maintained over time. Unfortunately, staff training often is limited to one-day inservices that provide some knowledge but very little skill development and/or transfer into appropriate settings. Successful staff training provides both the foundation knowledge necessary to understand the topic at-hand and the skill development *and supervision* in the settings where the knowledge will be applied. While this may involve a significant investment in staff time, it also will reinforce the importance of the inservice area, ensure that staff have the skills needed to independently use the information with, for example, their students, and develop a level of staff confidence such that they will be able to apply the skills to new situations and to train new staff over the years in the lessons learned. In the end, the specification of the functional roles and responsibilities that a school needs to accomplish its goals is critical to both the building's personnel planning and development and to staff confidence and morale. While the division of labor and tasks could result in establishing new job descriptions, the use of broad and flexible job descriptions is recommended over those that link particular professions to stereotyped and overly specific jobs and activities. Ultimately, the skills, commitment, and personal interactions of the staff will more powerfully determine the building's success than the technical adequacy of the job description.

3. The *relationships and process variables* part of the Human Resources System qualitatively involves the monitoring and reinforcement of (a) the processes that integrate the needs of the client groups, the goals of the Performance System, and the personnel who will provide services; (b) the processes that create positive school and working climates; and (c) the processes that ensure good group interactions, sound communication, strong leadership, and appropriate decision making. In essence, the school psychologist working here is functioning as a process consultant or a human relations specialist, but clearly, this is not out of any psychologist's area of expertise. To accomplish

any task, one must always attend both to process and to content and outcomes. While content and outcome often determine whether a building has the skills or capacity to complete a goal, the process typically determines whether the skills are ever applied and to what degree. The issue here is productivity: Does a staff have the motivation and coordination to accomplish more than would be predicted by their raw skills alone, or will they accomplish only the bare minimum without regard for the loss that that entails to the students?

PERVASIVE SYSTEM VARIABLES

The Pervasive System Variables are building, district, and community variables that impact the Performance and Human Resources and People Systems in both positive and potentially negative ways (Evans, 1996; Fuhrman & O'Day, 1996). In essence, these are the macro-level variables that can affect system morale, motivation, and satisfaction. At the same time, many buildings are able to insulate themselves from these variables, especially when they impact at a district level, and create their own building-level norms and approaches such that they can accomplish far more than the dysfunctional district within which they exist. In total, there are six Pervasive System variables. Briefly, they are

1. The *Incentive/Reward Factors* are those formal and informal factors that motivate teachers and other building and district staff people to accomplish their educational goals. The most formal of these factors are the contracts that staff people are working under, and the conditions under which those contracts were negotiated and accepted. Numerous studies and public polls over the years have found that salary is not the most important motivating factor keeping our teachers and other educators in the classroom and profession (usually salary ranks anywhere from fourth to seventh). However, when appropriate raises are not forthcoming, when union-administration tension around a contract exists, and when strikes or other work-stoppages occur, staff motivation can decrease and the collaborative relationship between teachers and administrators (including building principals) may suffer. Overall, this can significantly interfere with the organizational change and strategic planning process, and its residual effects may persist for many years after the original contractual conflict has ended. On an informal level, building staff are most motivated by their own collaboration and accomplishments, their feeling that they are making a difference in their students' lives, their belief that they have some autonomy in determining what and how they want to teach, the building-level recognition that they receive from their peers, and the incentives available to them—for example, opportunities to participate in advanced training, district-level leadership activities, and innovative classroom and other programs. Critically, many of these informal, yet powerful, incentives and rewards should be identified by and integrated into the strategic planning process. Two important incentives are knowledge and time. Many organizational change programs require professional development or inservice training, and they provide this training (often using substitute teachers and release days) during the school day with follow-up grade- and cross-grade-level team meetings during other school days. Collectively, this training provides teachers with additional knowledge and skills that make them more effective and efficient in the classroom and with an additional incentive or "reward" of time during the professional day to learn and master these skills. In addition, the use of "school time" for professional development communicates the importance and role of the training provided and the fact that the organization respects the staff's time and professional commitment.

2. *Quality of Life and Climate Factors* coexist, to a large degree, with the incentive and reward factors. Elements of this factor include those tangible and intangible needs that must be present in order to get the work of the building done (e.g., books, sufficient desks, supportive teacher-principal relationships, appropriate provisions for safety). All of these elements ultimately converge to create a positive (or negative) school climate that creates or supports the motivation and morale discussed for the incentive factors above. While there are many operational definitions of positive school climate and many school climate scales, a synthesis of the school climate areas most identified and used include (a) a safe and orderly environment, (b) a

clear school mission with appropriate levels of planning and action and a good use of resources, (c) instructional leadership and smooth administration of the school, (d) opportunities for students to learn and stay on-task and high expectation for student social and academic achievement, (e) positive home school relations and parent involvement, (f) student involvement and influence, (g) good teacher and/or staff morale, and (h) positive race relations.

3. *Environmental Factors* include those community-based factors that directly or indirectly affect the management and organizational atmosphere of the school. These community-based factors include (a) the demographic and social, economic, governmental, and political status and/or circumstances of the neighborhood or broader community around the school and (b) issues related to population age and growth, families and households, minorities and race/ethnicity/gender status, crime, health, attitudes and values, personal income and employment, economic growth, housing, transportation, government income and expenditures, government support of the community and education, political participation, and philanthropy. In the context of strategic planning, many of these factors are evaluated in the context of an environmental scan and/or analysis. When doing this, the strengths, weaknesses, opportunities, and threats within the community, from the school's perspective, need to be appraised. Ultimately, the positive and/or negative impact of the environment on the school must be determined and integrated into the strategic planning process. Clearly, the environment potentially affects the school's quality of life and available resources, as well as the needs of both the clients and the staff. As a special case in the environmental factor domain, mention must be made of special events and circumstances that concurrently affect a community and its schools. Unfortunately, the best examples of these events tend to be catastrophic, but clearly, less intense circumstances also can be significant. As examples, then, one must recognize the economic, personal, and emotional impact of events such as (a) the bombing in Oklahoma City and the tragedy of Columbine High (and others); (b) Hurricane Andrew, the San Francisco/Oakland earthquakes, and other natural disasters; and (c) the more prevalent but less publicized situations involving threat, violence, loss, and death that occur in our classrooms, on our school grounds, and within our communities. These "environmental" events affect the day-to-day and year-to-year lives of our students and schools as much as the more-evident demographic and economic factors within our communities. And yet, many of these events have more long-standing and subtle impact over time, and thus, strategic plans and interventions are needed for them to prevent their long-term effects and turn their presence into opportunities for learning and prevention.

4. *Political Factors* occur both within the school district or building and outside of the district or in the community. While the within-district factors are implicit in the incentive and climate factors above, the out-of-district facets are particularly pertinent here. These political factors involve ways that outside stakeholders in the system utilize their formal and informal power (in overt and covert ways) to influence the status and direction of the schools. At a macrosystem level, these political factors include local governmental (e.g., financial or morale) support, the impact of school boards and their elections, the selection or election of the superintendent, the participation of the business community indirectly or through, for example, business partnerships, the involvement of advocacy and special interest groups. At a building level, they additionally include the involvement of the Parent Teachers Association, influential parents and community leaders, and specific client groups to the degree that they are organized or command attention. It must be noted that while politics often is considered negative and intrusive, this does not have to be the case. In fact, through a strategic planning process, government, business, and other community leaders can be integrated into a comprehensive and integrated plan of action such that the political system can be directly used to support the broader goals of the school and school district. In the end, most communities are willing to commit time, funds, and energy to a process when clear goals are identified and important outcomes are (potentially) realized. This is the typical and expected outcome of the organiza-

tional change process, and this process often can rise above a political system bent more on power and influence than equity and excellence.

5. *Cultural Factors* within a school or school system involve the stated and unstated values, beliefs, assumptions, norms, policies, and rules that affect the productivity of the school or system and its quality of life. From a historical perspective and like any complex organization, a school goes through specific life stages that reflect its development, personnel, clients, and goals and objectives. With the introduction of a new principal, with the turnover of significant staff members, with shifts in demographics, with new mandates from state or district levels, the school adjusts, develops new norms and procedures, and redefines its "culture" or way of doing business. Without the understanding of a school's culture, organizational change is more difficult, random, and tenuous. *With* this understanding, the positive aspects of the culture can be utilized, and the weaker aspects either isolated, minimized, or changed.

6. The *Arational Factors* within a system involve those dysfunctional, skewed, and unchangeable characteristics that interfere with the system's progress if allowed. While these characteristics typically can be identified and understood, they cannot be changed—or, at least, their change will take a monumental effort. These characteristics include system resistance, inertia, self-interest, unpredictability, emotionality, rejection of data, hidden agendas, and many more. At the very least, arational factors must be identified so that people within the system can agree to ignore or circumvent them and not be frustrated by their presence. At the very most, arational factors might be so strong within a system that organizational change should not or is not attempted. Given this latter situation, one organizational option is to literally dismantle the system so that a new and improved system can replace it.

Strategic Planning Process

Strategic planning is a systematic process that increasingly is being used in education to help schools and school districts to anticipate and plan their future directions while considering both internal and community-based strengths, weaknesses, threats, and opportunities (Schlechty, 1997). Designed to promote and encourage teamwork, strategic planning involves a number of systematic activities that initially may take a year or more to get into place. Nonetheless, once implemented, strategic planning often takes considerably less time as it (a) develops and monitors the programs and activities designed to meet the system's mission and goals, (b) tracks their progress over time, (c) makes mid-course adjustments, and (d) attempts to anticipate other, future events that may affect the school or school district in its pursuit of educational excellence. Ultimately, strategic planning introduces a systems perspective to education that emphasizes planning, cost- and time-efficiency, and maximum resource utilization. In the long run, it can help a school or school district to identify and rededicate itself to its primary mission and goals, and ensure that these goals are met effectively and efficiently.

Cook (1990) and Valentine (1991) provide two overlapping perspectives as to how strategic planning should occur. Cook divides the strategic planning process into five phases: Phase I: Creating a Base for Planning and Change; Phase II: Developing the Strategic Plan; Phase III: Developing the Implementation Plan; Phase IV: Implementing and Monitoring the Plan; and Phase V: Renewing the Plan. During Phase I, the school or district engages in the following activities:

1. An External Environmental Scan and Analysis where (a) economic, demographic, social, political, and education trends are analyzed; (b) national, state, regional, and local patterns in the trend areas above are evaluated; (c) scenarios that predict future environmental events and their impact on the school are created; and (d) school-based responses to the most likely scenarios, within the resources and the school's capabilities, are generated.

2. An Internal Organizational Scan and Analysis where the strengths (or assets), weaknesses (or limitations), resources (or opportunities), and barriers within the school are identified, guided by the organizational map described above and depicted in Figure 2.

3. An Analysis of Stakeholder Perceptions and Expectations (as described earlier) whereby client needs and community (political) goals are identified.

4. A Community Education Process that ties the entire process together (a) by helping the community to understand the data collected, the trends and scenarios identified, and the need for strategic planning and change and (b) by involving the community and its stakeholders as equal partners in the remaining phases of this planning and change process.

In Phase II, the strategic plan is written by taking the results of the external and internal scans and sequentially developing a vision statement, a mission statement, strategic goals, and an outline of the implementation plan. This plan is then reviewed by members of the planning team, by critical client and stakeholder groups, and by others who might be either politically or functionally important to the implementation process. Ultimately, the feedback from this review process is synthesized and evaluated, and a revision of the strategic plan is "finalized." According to Cook (1990), the Phase II process should take approximately 3 months, and even then it is expected that adaptations to the plan will occur over time.

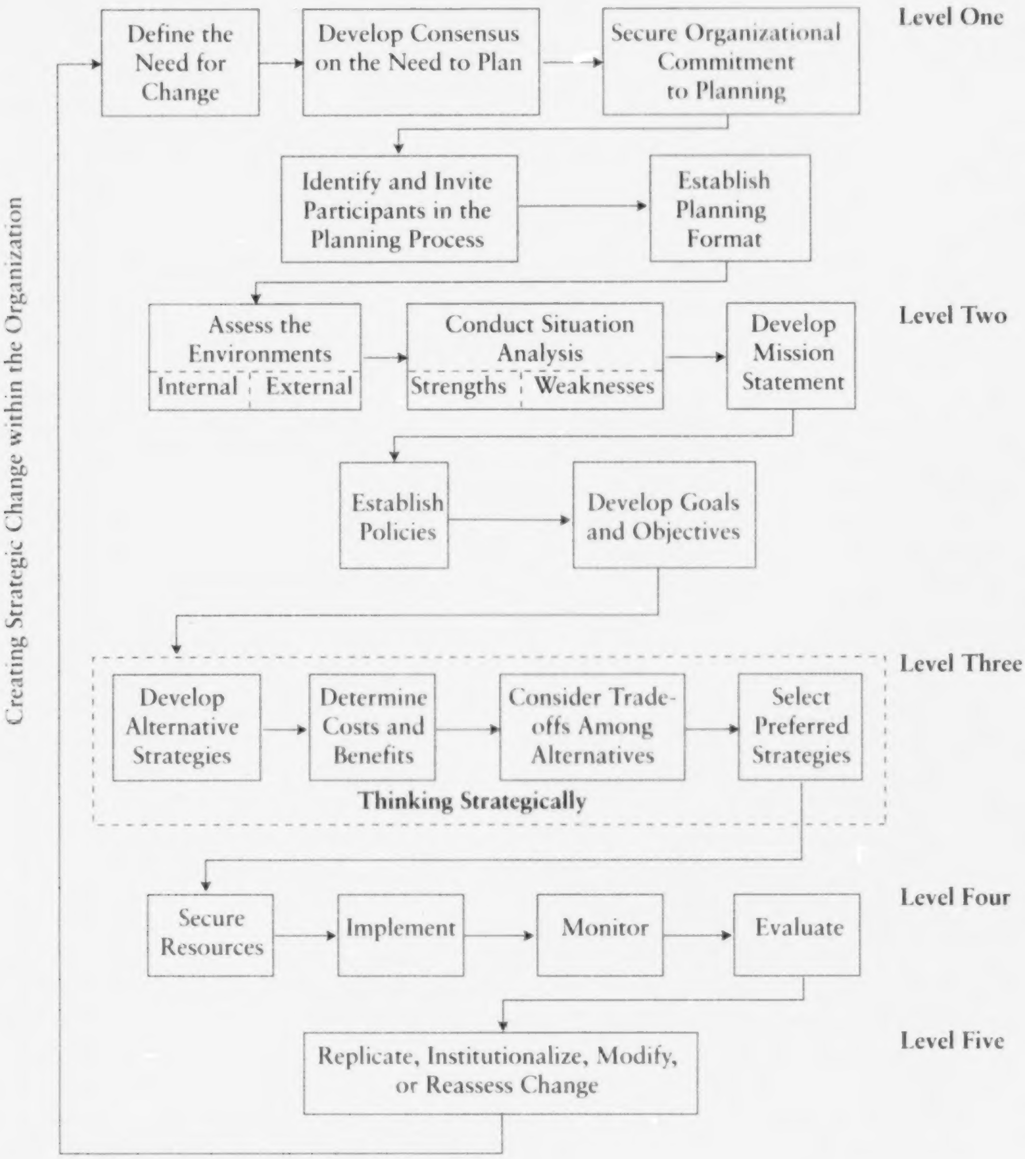
In Phase III, the Implementation Plan is formalized through the development of district-wide and building-level plans. It is at this point that the coordination of the planning and budgeting time cycles shown in Figure 1 becomes critical. Relatedly, the Implementation Plan actually involves three components: a 3- to 5-year "Strategic Operational Plan," an "Annual Operational Plan," and a series of "Individual Performance Plans" for each personnel unit involved in the implementation process (United Way of America, 1989). More specifically, the Strategic Operational Plan should contain a series of operational goals and goal statements, a prioritization of these goals, the organizational unit(s) or department(s) responsible for each goal, the 3- to 5-year time frame for the completion of each goal, and the 3- to 5-year costs of the activities needed to accomplish each goal. The Annual Operational Plan should identify, *for each operational goal or sub-goal*, the action steps needed to accomplish the goal, the key results expected, the individuals responsible for taking the action steps, the resources and budget needed, the timelines (including beginning and end dates) required, and the evaluative process to determine the goal's attainment. Finally, an Individual Performance Plan should involve (a) a performance planning section with areas of responsibility, operational goals, action steps to achieve the goals, and goals priorities specified; and (b) a performance review section to document actual achievements, levels of goal achievement, continuing responsibilities, and overall performance ratings.

In Phase IV, the strategic plan is implemented and monitored using the annual operational plans and the individual performance plans. As activities are completed and sub-goals are accomplished, it may be necessary to adapt some timelines, budgets, responsibilities, or even some operational goals. This should be expected, and critically this should be done in the same planful way in which the original strategic plan was developed.

Finally, in Phase V, the renewal of the strategic plan is addressed. At this point, the school typically has accomplished a great deal, and yet it must determine if its strategic direction is still valid. To do this, the school and planning team should re-evaluate the external and internal environmental conditions since the original writing of the strategic plan, re-visit the mission statement and strategic goals, re-focus the strategic plan as necessary, and renew the organization's commitment and energies toward the next level of accomplishment.

Valentine (1991) organizes her strategic planning process into five levels: Level 1: The Pre-Planning Stage of the Planning Process; Level 2: Re-Defining the Organization's Direction; Level 3: Developing the Strategic Mind-Set; Level 4: Implementing Goals, Objectives, and Strategies; and Level 5: Reassessing and Institutionalizing the Change Process (see Figure 3). While Valentine's strategic planning process appears more complex and comprehensive than Cook's (1990), hers is actually just a more descriptive expansion. Thus, it is instructive to review her process as shown in Figure 3 and compare it to Cook's approach above. In the end, every facet of Valentine's model has already been described. It does, however, provide a good summary to this section of the chapter.

Figure 3. Valentine's strategic management and planning model


Level One
Define the Need for Change
Develop Consensus on the Need to Plan
Secure Organizational Commitment to Planning
Identify and Invite Participants in the Planning Process
Establish Planning Format
Level Two
Assess the Environments
Internal
External
Conduct Situation Analysis
Strengths
Weaknesses
Develop Mission Statement
Establish Policies
Develop Goals and Objectives
Level Three
Develop Alternative Strategies
Determine Costs and Benefits
Consider Trade-offs Among Alternatives
Select Preferred Strategies
Thinking Strategically
Level Four
Secure Resources
Implement
Monitor
Evaluate
Level Five
Replicate, Institutionalize, Modify, or Reassess Change
Creating Strategic Change within the Organization

Adapted with permission from Valentine (1991).

BEST PRACTICES IN THE AREA

From a strategic planning perspective, much of the discussion above has identified the critical steps and best practices in facilitating school-based organizational development and change. From a school psychological perspective, what remains is a discussion of the steps that school psychologists need to take in order to actually implement the change process. This will be discussed in five phases: Phase I: Initiating the Strategy; Phase II: Preparing for Implementation; Phase III: Training for Program Implementation; Phase IV: Implementing the Planned Change Process; and Phase V: Evaluating the Planned Change Process.

In Phase I, the school psychologist makes an administrative entrance into the school with the expressed goal of facilitating the strategic planning and organizational change process. While this process often requires a series of meetings for relationship-building and the clarification of change goals and objectives, it can move more quickly when the administration has a sound grasp on the organization's strengths and weaknesses and the commitment to true change. In accomplishing the tasks of this phase, the school psychologist:

1. Meets with the principal and/or the administrative team.

2. Orients the administrative staff and other key personnel as to the conceptual underpinnings of strategic planning and organizational change, and describes its goals, strategies, and likely outcomes.

3. Obtains administrative approval to proceed with the process, and contractually agrees on the official goals, outcomes, and timelines needed.

4. Identifies the key administrative and other participants with the principal and the coordinate structure that will facilitate the planned change process.

5. Begins to learn as much about the organization as possible including its organizational structure and personnel, formal and informal rules and norms, policies and procedures, and organizational history and environment.

During this phase, the school psychologist must determine (a) whether the building is organizationally and motivationally ready for strategic planning, (b) whether the school psychologist has the skills and resources to facilitate this particular change process, and (c) whether the school psychologist wants to. In making these decisions and in managing the entry process embedded in Phase I, the school psychologist should:

1. Assess his or her own personal skills and the organization's history of change efforts before agreeing to lead the consultation process.

2. Specify, at least informally, the amount of time, effort, and money that may be needed to complete different parts of the planning and change.

3. Clarify potential goal differences (e.g., administrative versus staff-driven change, crisis versus prevention-motivated change, outcome versus process change) between himself or herself and the administration.

4. Establish a written or verbal contract with the administration, making sure that outcomes, timelines, and areas of responsibility are explicit.

5. Emphasize that change is sequential and time-oriented, and that the ultimate goals are system efficacy and the ability to anticipate and prevent future problems.

6. Recognize and communicate the complexity of the consultation relationship relative to both staff and administration, discussing especially issues of dependency, authority, confidentiality, and competence.

In Phase II, the school psychologist begins the preparations for implementing the planned change process by making a formal entry with the building staff. At this point, the same groundwork completed earlier with the administration is covered, and the process from the environmental analysis and organizational assessment through the development of action plans is begun. In accomplishing the tasks of this phase, the school psychologist:

1. Re-enters the building at the staff level.

2. Orients the staff to the concepts, goals, and strategies of the planned change process.

3. Obtains staff agreement as to their participation, desires, and expected outcomes.

4. Identifies formal and informal key stakeholders and organizational gatekeepers.

5. Does a preliminary study of the building's organizational climate and climate change potential and its current mode of operation and functioning.

6. Establishes a Strategic Planning Team, representing a cross-section of the staff, to facilitate the organizational change process.

7. Completes the environmental analysis, organizational assessment, and other facets of the strategic planning process.

By Phase III, the Annual Operational Plans should be complete, and the school psychologist has identified the training needed by the building in order for the strategic plan to succeed. For example, given the goal of improving the social and academic skills of students in an elementary school, the staff may identify the need for social skills training, a curriculum-based assessment process tied to curricular interventions, and a parent involvement program. At this point the training program must be delivered such that staff has the knowledge, skill, and confidence to implement the various facets of the plan. During this process, the school psychologist also should monitor the staff's commitment and reactions to the training and the building's changing group climate. Critically, the school psychologist *should not* proceed to the actual implementation of the planned change process until all of the staff are trained in the needed skills and components.

In Phase IV, the planned change process is fully implemented, and in Phase V the process is formatively and summatively evaluated, looking at both outcome variables (e.g., increases in student achievement, decreases in student retentions and suspensions) and process variables (e.g., satisfaction with the change process, improvements in school climate). During these phases, the school psychologist should attend and respond to potential staff and administrative resistance, while ensuring that building personnel develop skills *in the planned change process itself* such that they are able to independently manage and renew the process over time. In the end, three questions become critical: Are we accomplishing our goals? Are we doing our job? How are we doing the job?

SUMMARY

This chapter has focused on the important steps and procedures that relate to school reform and that facilitate school-based organizational change and strategic planning. After providing a context and the assumptions reinforcing the need for such change and planning, the stages of problem solving were described focusing on both the individual school and the school district. The importance of coordinating the change process with a district's various planning and budgeting cycles was emphasized, and then the characteristics of an operating school district were described by analyzing the Receiving System, the Performance System, the Human Resources and People System, and the Pervasive System Variables. Two perspectives of strategic planning then were introduced with five phases being typical: Phase I: Creating a Base for Planning and Change; Phase II: Developing the Strategic Plan; Phase III: Developing the Implementation Plan; Phase IV: Implementing and Monitoring the Plan; and Phase V: Renewing the Plan. The chapter concluded with a discussion of the steps that school psychologists need to consider as they implement organizational change and strategic planning at the building level.

Throughout this chapter, it has been assumed that school psychologists can *and should* be primary facilitators in the organizational change and strategic planning process. Today's children are coming to the schoolhouse door significantly at-risk for both educational and social failure. School psychologists are *the best trained* mental health and educational specialists in the schools today. We *must* take responsibility for guiding our schools through a successful reform process—building on the lessons learned and avoiding the potential pitfalls present. With our success, we will ensure that the next generation of school children is prepared to succeed themselves—not just at the schoolhouse door, but when they leave that door to return to their homes, to enter the workforce, and to lead their communities.

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Darling-Hammond, L. (1997). *The right to learn: A blueprint for creating schools that work.* San Francisco: Jossey-Bass.

An important work by an educator and researcher who began her work as a public school teacher and has been involved in the policy and practice of school reform for many years. Darling-Hammond's book describes ways to significantly improve not only individual schools but the overall system of education. Focusing especially on the needs and diversity of students, this book addresses such topics as how to structure "learner-centered" schools, to staff schools for teaching and learning, to reinforce teaching as a profession, and to respond to standards without losing the educational process.

Sarason, S. B. (1990). *The predictable failure of educational reform: Can we change before it's too late?* San Francisco: Jossey-Bass.

Sarason, in his inimitable style, analyzes the American school system and its culture to determine whether the school reform process has any hope of success. Written through Sarason's experiences and interactions in the schools and with his typical incisive and no-holds-barred style, Sarason identifies the many pitfalls *at the school level* that, if left unattended to, predict the failure of the current reform process. Among these are the fact that educators do not understand the reform process, they are not willing to change the entire system, they do not want to deal with the issue of power between teachers and administrators, and they do not recognize that, unless pushed, individuals will do the least amount of reforming to get by.

Valentine, E. P. (1991). *Strategic management in education: A focus on strategic planning.* Boston: Allyn & Bacon.

This "book" (which is actually sold in a three-ring binder) provides a comprehensive strategic management model that is designed to assist the reader in guiding a school district through the strategic planning process. Supported by case studies and citations from the management literature, the book has three parts: Strategic Management—Its Role in Education; Planning for Strategic Change; and Creating Strategic Change Within the Organization. In addition, the book has over 30 step-by-step worksheets that operationalize the process and make the author's approach an easy one for anyone who understands the interdependent components of the school system to implement. This is a useful book that can help a reader to more completely understand the inner workings of strategic planning.

United Way of America. (1989). *Strategic management and United Way.* Alexandria, VA: Author.

If you ever wondered why the United Way is so successful, this will answer your question. In this systematic eight booklet set, the United Way describes in detail how to apply strategic management to community-wide planning and non-profit administration. These booklets divide strategic planning into a six-step process that includes environmental analysis, organizational assessment, strategic direction setting, the formation of strategic plans, implementation, and performance evaluation. Supplemented by the Introductory and the final "Putting It All Together' booklets, the reader has a comprehensive and practical resource that provides important insight and sequential procedures to the design and implementation of organizational analysis, strategic positioning, and change.

18

Best Practices in Standards-Based District-Wide Assessment

Mike L. Vanderwood
University of California-Riverside
Kristin M. Powers
California State-Long Beach

OVERVIEW

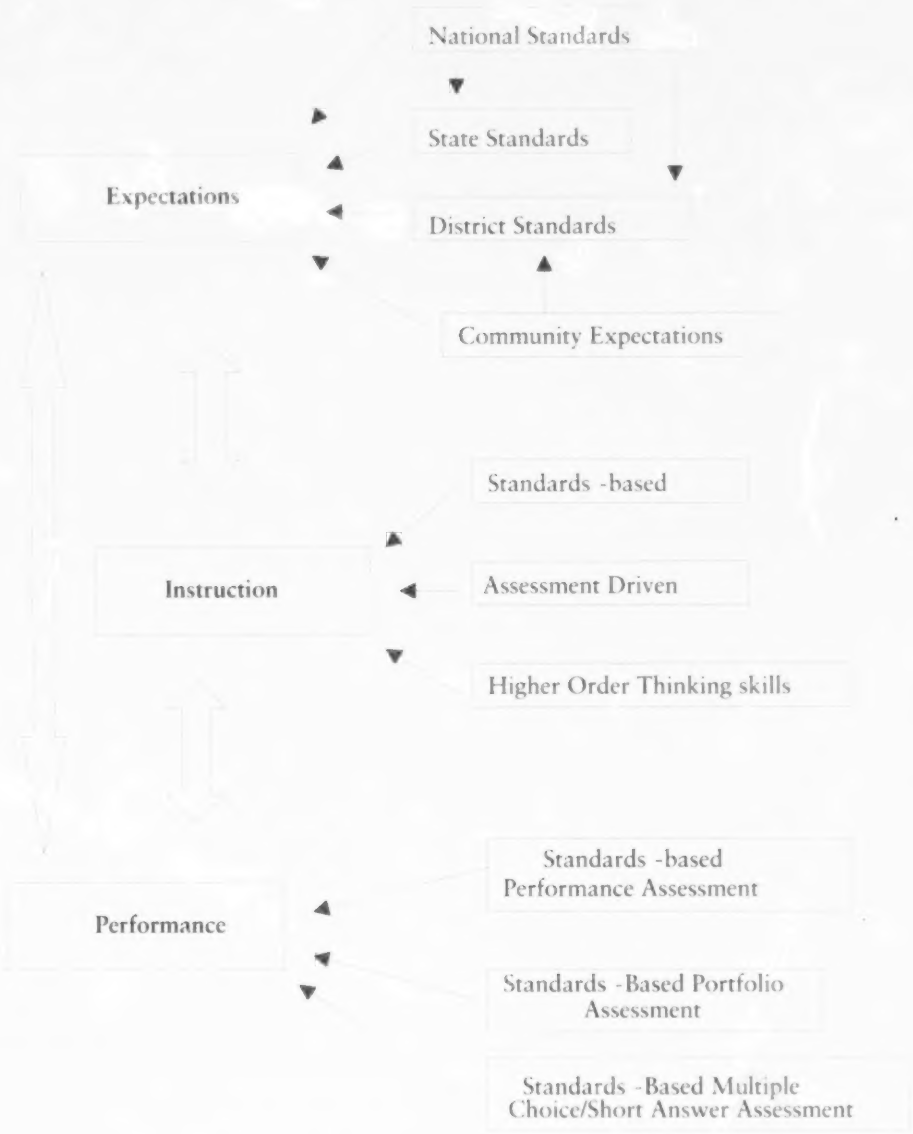
The educational standards movement is clearly one of the most important school reform activities of the last decade. Some authors (O'Neil, 1995; Shepard, 1993) suggest that standards are a response to *A Nation at Risk* (National Commission on Excellence in Education, 1983), which urged the identification of educational goals for all students. One of the first national efforts in the standards arena was the establishment of Mathematics standards in 1989 by the National Council of Teachers of Mathematics (NCTM). The success of the NCTM standards encouraged the development of standards in other areas including science, civics, dance, language arts, music, and social studies (Marzano and Kendall, 1996). In addition to the work of national organizations, 49 states have developed academic standards and the federal government has encouraged the use of standards through the Improving America's School Act (IASA) and other federal legislation.

Owing to the 1994 IASA legislation, the 49 states that have developed state standards are developing standards-based assessment systems that will in many cases replace traditional norm-referenced systems. According to the legislation, states must report progress on their approved standards by performance on assessment systems that are aligned to the standards. In essence, the federal legislation has caused a major shift in the type of assessments states are using that has in turn affected the type of assessments districts are using to supplement state testing (Hansche, 1998).

Significant debate has centered around the need for national standards and whether the standards movement will ever significantly impact education in the United States. Although Brandt (1995) suggests that national standards will not occur and a study by Gandal (1996) argues that most state standards are weak, the number of districts implementing standards-based reform has increased significantly in recent years (Marzano & Kendall, 1996). Standards-based reform not only addresses the content and skills that are taught but also how they are assessed and reported that requires significant change for those who develop and use assessment data.

As described in Figure 1, within the context of a problem-solving model, state and district assessment information can be used as sources of information for convergent data about student performance. The expectations for student performance are based on multiple sources of information that are distilled into district standards. The standards are used to guide instruction that focuses on higher-order thinking skills and is routinely informed by assessment information. Districts determine the progress of their students by using multiple sources of information that are based on a variety of assessment techniques. Teachers are encouraged to check on performance throughout the academic year with embedded assessment procedures. These informally administered tests are linked to the standards and intended to provide

Figure 1. Standards-based system within a problem-solving context


National Standards
State Standards
Expectations
District Standards
Community Expectations
Standards -based
Instruction
Assessment Driven
Higher Order Thinking skills
Standards -based Performance Assessment
Performance
Standards -Based Portfolio Assessment
Standards -Based Multiple Choice/Short Answer Assessment

teachers information about the student's performance in the standard area. Teachers are not required to wait until the end of the year to see if the students are meeting the district's or state's expectations. Although standards-based assessment systems are often primarily performance-based, best practice suggests using a multi-modal approach to assessment.

The intended advantage of standards-based district-wide assessment over traditional norm-referenced large-scale assessment is the more direct connection of the assessment to district expectations. Standards are the starting point for both instruction and assessment. Typically, standards-based assessments are criterion-referenced versus norm-referenced and the information from the assessment systems are generally reported differently than in traditional models. This chapter will review the basic characteristics of standards-based district-wide assessment systems with the purpose of providing school psychologists with information needed to gain an understanding of the quality of their district-wide assessment. Additionally, suggestions about how to include standards-based information into psychological reports will also be provided. Psychologists who want to develop an assessment system should turn to a more thorough source such as *A Comprehensive Guide To Designing Standards-Based Districts, Schools, and Classrooms* (Marzano & Kendall, 1996), which is reviewed in the Annotated Bibliography.

BASIC CONSIDERATIONS

Definition of Terms

In her seminal work (Ravitch, 1995), Diane Ravitch points out that the term "standard" is used in many fields and is usually connected to some form of evaluation. Although within the field of education there is not a universal definition of the term, most states create "content" and "performance" standards and use them to inform the development of standards-based assessments. Content standards describe what students should know and be able to do while performance standards specify how good is good enough. Benchmarks is another term used quite frequently, yet the definition is less clear. There are three different forms of benchmarks: (a) descriptions of information and skills students should be taught, (b) performance activities, and finally (c) performance tasks (which are very specific and contextualized performance activities). Marzano and Kendall (1996) suggest that states and districts should use the first definition of benchmarks in their documents, but also include sample performance activities and tasks.

Proficiency level is another term used quite often in standards-based assessment systems. Instead of focusing on a student's score or the average score for a classroom of students, terms such as "Advanced Proficient," "Proficient," or "Novice" are used instead to help teachers understand student performance. Typically, the cutoff scores used to separate the levels are created through a standard setting procedure that consists of obtaining consensus about the quality of the performance at each of the levels. In other words, a group of stakeholders, which could consist of content experts, teachers, parents, administrators, and students, decide on the performance criteria for each level and then determine cutoff scores. The criterion referenced approach is preferable to using set percentile ranks to separate levels (e.g., Proficient equals 40th to 70th percentile). One problem with the percentile approach is that same percentile scores on two different tests does not always equate to the same level of mastery of the content.

District administrators, principals, and teachers can use proficiency levels for goal setting and as a concise index of how much improvement has occurred. Teachers can set a goal to improve from having 20% of their students at the Proficient level or above, to having at least 70% at that level by the end of the year. Principals and district administrators can use the same approach at building or district levels and feel comfortable that by meeting the goals, students will be able to perform at an acceptable level.

Source of Standards and Alignment to Assessment

As previously mentioned, several national organizations created standards to help states guide their standards development and to attempt to influence the teaching of specific subjects. States and districts often start with these standards and other documents such as the *Content Knowledge: A Compendium of Standards and Benchmarks for K–12 Education* (Kendall & Marzano, 1997). A tenet of the standards movement is that each community (state or district) should ensure that the standards selected meet the needs of their population. States and districts often modify the standards to more appropriately represent the population they are serving.

One of the proposed strengths of a standards-based assessment system is the alignment between the standards and the assessment. As Webb (1997) points out, creating alignment between what is expected, what is taught, and what is assessed can significantly strengthen an education system. Some authors argue that because of the lack of alignment between standardized norm-referenced tests and instruction, these tests are unable to assess the impact of education reform or the progress of a particular student (Baker, Freeman, & Clayton, 1991). In fact, in a study of 25 states, most states did not have assessments aligned with their standards (Lagurada, Breckenridge, Hightower, & Adleman, 1994). Referring to Figure 1, in a standards-based system, alignment is created by starting with the standards and using them as a basis for instruction and assessment.

Purpose and Consequences of the Assessment

Standards-based district assessments may be used for each of the purposes of assessment identified by Salvia and Ysseldyke (1998): (a) accountability and program evaluation, (b) instructional planning and progress monitoring, (c) implementing and evaluating interventions, and (d) making entitlement decisions. In addition to providing useful information for all types of problem solving, standards-based districtwide assessments have the potential to bridge the gap between special and general education programs. The "disjointed incrementalism"(Reschly & Ysseldyke, 1995) that characterizes the poor coordination and curricular discontinuity between special and regular education programs is minimized when general and special education teachers, psychologists and other related service providers share common assessment tools, strategies and language.

A benefit of using standards-based assessments for making important educational decisions is a closer alignment between the assessment, curriculum, and district standards than afforded by commercial, norm referenced tests. In addition, standards-based assessments are commonly used for program evaluation. The close link between standards, curriculum, and assessment makes standards-based assessment a critical instructional tool. In the best cases, the assessments have been carefully selected or constructed to represent important learning objectives. They are designed to provide important information about student progress that can inform instruction. For example, an error analysis of a running record may indicate specific reading skills that need to be taught to a student or group of students who all make similar errors. Similarly, scoring student essays with the history rubric may identify specific skills such as "analyzing two or more cause and effect relationships" that are less well developed than other skills among the majority of students in a particular class.

Types of Assessment

Of course, the quality of the standards-based districtwide assessment can affect the utility of the information obtained. Because content and performance standards often target higher ordered (e.g., analyses, synthesis) and authentic skills, standards-based assessments are more often performance assessments than traditional multiple-choice tests. Performance assessments require students to construct rather than select a response, and therefore the skills the student applied in constructing a response may be judged and the type of mistakes the students make may become the target of future instruction. The benefits of the strong instructional relevance of performance assessments is sometimes off set by concerns about the psychometric limitations of performance assessments (Salvia & Ysseldyke, 1998). Inter-rater reliability is a concern because performance assessment results are based on teacher judgments. Intensive training on these assessment procedures, provided during the initial implementation and continuing thereafter in the form of booster-trainings, is essential to ensuring adequate inter-rater reliability. The inter-rater reliability of performance assessments, such as those listed above, can be greatly improved with adequate training, precisely defined rubrics, and anchor papers that describe the performance of students who meet various criteria (Linn, 1994; Salvia & Ysseldyke, 1998).

In addition to potential problems with inter-rater reliability, performance assessments are often criticized for their lack of generalizeability (Mehrens, 1992). Well-constructed performance experiences provide students with an opportunity to demonstrate the depth of their knowledge about a very specific subject (e.g., "photosynthesis"); however, it is not easy to generalize those results to how the student would perform on another task or subject (e.g., "evolution"). Unlike multiple-choice tests that can sample (some argue superficially) a wide range of student knowledge in a short period, performance assessments forfeit breadth of scope for greater depth of inquiry. Therefore it is difficult to make score-based inferences about a student's mastery of a general subject such as science based on the results of one or two performance assessments.

Because of the aforementioned limitation of breadth of scope of performance assessments, the best approach to standards-based district-wide assessment is to combine performance tasks with multiple-choice items. This approach allows districts to gain thorough knowledge about performance on critical standards while providing basic information about knowledge attainment on the remaining set of standards. By ensuring all standards are assessed, this approach helps emphasize that all standards are important.

Another assessment component used in standards-based systems is embedded assessment, which is the use of assessment tasks during instruction that are similar to those that will be administered during the district-wide assessment. This component of the assessment provides students with practice and also gives teachers a clear understanding of students' skill levels and where instruction could be targeted.

Inclusion of Students With Special Needs

As Vanderwood, McGrew, and Ysseldyke (1998) point out, students with disabilities are often not included in large-scale assessment at national, state, and district levels. Additionally, these same students are not included during the development and norming of many tests (Salvia & Ysselydke, 1998). By using performance-based tasks, standards-based assessment systems should be able to include more students with disabilities than traditional standardized norm-referenced assessment. In turn, the results should give teachers, administrators, and policy makers a more complete picture of educational performance of our student population. Given the push in the Individuals with Disabilities Education Act of 1997 (IDEA 97) to connect special education to the general education curriculum, it is critical that students with disabilities are considered and involved in the development of district-wide standards-based assessment.

For those students who are unable to participate in the standards-based district-wide assessment, IDEA 97 requires that they must be tested with an alternate assessment. Most states provide an alternate assessment that can in some places be used to be an alternate for the district assessment as well. In situations where an alternate assessment is not available, best practice in alternate assessment is to base the assessment upon the district standards to the greatest extent possible. The form and delivery of the assessment may be different than the assessment offered to other students, but the source of the expectations for performance should continue to be the district standards.

Reporting

One of the challenges in developing standards-based assessment is creating the performance standards that allow users to know how well students are performing. In essence, cut scores must be created to separate each proficiency level. A typical set of proficiency levels includes Novice, Basic, Proficient, and Advanced Proficient. Test developers must decide at what point do students move from being Basic to Proficient or Proficient to Advanced Proficient. Hansche (1998) argues that although there is not one right way to develop performance standards, test users should not create cut scores from norm-referenced tests and label them proficiency levels and suggest that the test is now standards-based. Just changing how test results are reported does not align the assessment with the standards nor with instruction. Psychologists who are asked to help develop performance standards should refer to Hansche (1998) or other more detailed references.

In a standards-based assessment system, scores are reported and goals are set differently than in standardized norm referenced assessment. As shown in Table 1, in a typical standards-based model, the percentage of students in each proficiency level is presented versus an average score for a building or district. By examining the percent of students in categories, districts can set goals such as having at least 50 percent of the district at Proficient or higher level. This method also allows consumers to gain a better picture of the change taking place within a district.

BEST PRACTICES IN AREA

This section details a mythical district that integrates all of the best practices mentioned and also provides

Table 1. Sample reporting format for a standards-based district-wide assessment: Percent of students at each proficiency level

Content	*Novice*	*Basic*	*Proficient*	*Advanced proficient*
Reading	30%	20%	35%	15%
Mathematics	22%	38%	32%	8%
Science	10%	45%	25%	20%

suggestions for the use of standards-based assessment data for 3-year reviews, problem analysis, and progress monitoring. The differences between a standards-based system and a traditional system are significant throughout the system, but this case study will primarily focus on the connection between standards and assessment.

Case Study

A large urban district began standard-based reform in the late 1980s. District personnel formed standard-setting committees to identify what students should know and be able to do at particular grades for specific content areas. National and state documents were used as starting points for each of the academic domains, and community members were selected to be active participants. A special emphasis was placed on including district employees and community members who work with or parent students with disabilities to ensure the standards represent *all* students. After content standards were developed, many committees developed performance standards or benchmarks that identify what level of performance meets the standards. The first step in developing the performance standards was the creation of performance descriptors that corresponded to expectations for what students at the Novice, Basic, Proficient, and Advanced Proficient are expected to know and be able to do. The descriptors were created through a combination of expert opinion and expectations of the committee members.

Based on the descriptors, another committee reviewed commercially available assessment systems and commissioned teachers within the district to develop tasks that focused on critical standards. After almost 9 months of review and development, the committee created assessments that were a combination of performance tasks and multiple choice items for grades 4, 8, and 11. The committee selected these grades based on the state's requirement, but a plan was developed to extend to additional grades in following years. Based also on the state's expectations, the committee decided to administer the district assessment in the spring a few weeks before the state assessment.

At the same time that the assessment system was being developed, using the standards as the starting point, committees developed curricular frameworks that delineated what was to be taught and provided example activities or lessons to develop the skills targeted by the standards. The curriculum committee worked with the assessment committee to create embedded assessment tools that teachers could use throughout the year to help gauge student performance. These assessments were designed to require students to respond in the same format that is required on the district assessment.

Use of Standards-Based Assessment By School Psychologists

The 1997 amendments to IDEA encourage the use of assessments that include "information related to enabling the child to be involved in and progress in the general curriculum." Standards-based district-wide assessments are designed to directly address the extent to which a child is meeting district expectations that are then taught in the district's curriculum. Therefore, these tools appear to be an excellent source of information for 3-year reviews and intervention development and monitoring.

Rather than repeating the battery of commercial, norm-referenced tests that were used to initially qualify a student, school psychologists can use standards-based district-wide assessment to focus on improving the special education programs provided to students with disabilities. The National Association of School Psychologists (NASP) recommends that re-evaluations focus on (a) evaluating the effectiveness of the student's current placement, (b) planning services that allow the student to participate in the general education curriculum to the maximum extent possible, and (c) investigating changes in qualifications *only* if requested by a parent or if there is evidence that the current qualification is no longer valid (National Association of School Psychologists, 1995). Standards-based assessments can be extremely useful in investigating each of these issues.

The increased emphasis in IDEA 97 on alignment between special education programs and the general education curriculum suggests that re-evaluations should incorporate district standards-based assessments as much as possible. Students' performance, particularly their gains over time, on standards-based assessments will provide good information on how well their current program is preparing them to meet the district standards and the general education curricular expectations. The district standards-based assessments provide a yardstick by which all programs and their effectiveness may be measured. If a student continually fails to make progress on these measures, then the Individual Education Plan (IEP) team should closely scrutinize the student's past and present opportunity to learn the skills and knowledge assessed by these measures. For example, it may become apparent that a student is engaged in rote, remedial work such as completing work sheets rather than constructing written responses to prompts. Repeated poor performance on the writing performance assessment is predictable given the student's limited opportunity to practice and receive instruction and corrective feedback on writing essays. Reevaluations that focus on program quality may even uncover systemic problems such as a failure to provide standards-based curriculum materials or sufficient training to special education teachers.

Planning for students' future services may also be informed by standards-based assessments, particularly for students who participate directly in general education programs. Modifications to the standards-based assessments such as extended time, use of a spell checker or calculator, or allowing the student to respond verbally to prompts read aloud should be extended to curricular modifications that occur in general education. Furthermore, district assessments provide critical information that can indicate areas in which the special education students' skills are discrepant from those of his or her general education peers. Careful analysis of this discrepancy will suggest specific interventions or modifications that will be necessary for the student to be successful in general education. Furthermore, students' performance on the standards-based assessment will identify specific skills to be targeted by the IEP so that the student may meet the district performance standards for graduation.

In addition to providing information for 3-year reviews and IEP planning, school psychologists can use these assessments to help analyze referral concerns and monitor progress. A unique aspect of some standards-based district-wide assessment systems is the use of embedded assessment. As previously described, embedded assessment is intended to provide students with practice with the district testing format and help school staff identify student concerns. Given that embedded assessment is linked to the district standards, school psychologists can monitor a student's progress across the academic year. Many districts ask teachers to select specific standards and only use embedded assessment throughout the year on those specific standards. School psychologists should investigate whether embedded assessment exists for referral concerns that may be connected to standards that the district is not assessing throughout the year. Although generally many embedded assessment tools are based on a 4 or 6 point scoring rubric, a qualitative analysis of the student's work over time can be extremely useful for providing intervention and instructional recommendations.

Besides focusing on individual student results, school psychologists can use standards-based assessment data to evaluate the effectiveness of school- or district-based programs and courses. The data can help describe the impact of a new reading series or a new approach to math that teachers are using to teach problem solving. Although program evaluation is often not as obvious as individual student evaluations, school psychologists can have a significant impact on students by assisting in the design and interpretation of system wide data.

SUMMARY

Large-scale assessment is in the midst of significant reform and change. The change in assessment systems is caused by the desire to more closely align assessment with what is expected of students. Some authors suggest that traditional standardized norm-referenced testing can not provide the data necessary to help schools improve. Standards-based district-wide assessment starts with standards that inform instruction and are the core of assessment. Substantial effort is placed into ensuring the alignment between the standards, instruction, and assessment. Besides typically including more performance assessment than traditional standardized norm-referenced assessment, standards-based procedures also report scores differently and attempt to create a focus that is broader than examining the average score. The process of creating proficiency levels requires an understanding of what distinguishes each level, which can be determined through expert judgement and consensus building. Schools can use the proficiency levels to set goals, and in fact, to inform school report cards.

School psychologists need to know the characteristics of strong standards-based assessment systems and be able to use the data for multiple purposes. Of course, with any assessment system there are psychometric and practical limitations. Performance assessments are typically less reliable than traditional multiple-choice tests, but the performance tasks can often provide teachers with information that is valuable for instructional planning. Test developers should ensure that all standards are appropriately assessed, although more critical standards may be addressed more thoroughly with performance tasks or portfolio assessment. Standards-based assessment systems can be used to help inform initial and 3-year reports, as well as serve as source for problem analysis and progress monitoring.

School psychologists can play an active role in helping develop, administer, or interpret standards-based assessment data. Within a problem-solving context, standards serve as the expectations that are the starting point for defining the problem or concern. Standards-based district-wide assessment can provide information that is relevant for problem analysis and progress monitoring. The assessment data can also be useful for informing 3-year reviews and helping IEP teams develop goals. In some cases the standards-based assessment can be used as a means to monitor the IEP goal.

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Marzano, R. J., & Kendall, J. S. (1996). *A comprehensive guide to designing standards-based districts, schools, and classrooms.* Alexandria, VA: Association for Supervision and Curriculum and Development.
A very user-friendly text that provides practical information about how to use standards throughout a school system. The authors provide several examples based on their substantial experience helping districts implement standards-based reform. This is the "how to guide" of standards.

Ravitch, D. (1995). *National standards in American education: A citizen's guide.* Washington, DC: Brookings Institution.
This seminal work about standards provides readers the necessary history and political scenery to understand the context of the standards movement. It is an essential source of information for those who want to be informed about standards-based reform.

19 Best Practices in Planning and Conducting Needs Assessment

Richard J. Nagle
University of South Carolina

OVERVIEW

Considerable attention has been given to the expanded role of the school psychologist to meet the demands of linking service delivery to school reform and restructuring initiatives (Knoff & Curtis, 1996; Romualdi & Sandoval, 1995). School psychologists can assume an active role in designing programs or services that meet the needs of children in their work setting. Needs assessment is a systematic process of collecting and analyzing data in order to identify needs and problems to be addressed in program planning, development, and modification. School professionals must develop clear and comprehensive goals that are responsive to the realities of the school and community. Since services should be those that are both required and desired, needs assessment serves as the foundation on which programs are formulated (Lewis & Lewis, 1983).

Definitional and Conceptual Issues in Needs Assessment

The most common model for identifying needs in the schools is the discrepancy between some current condition and some desired (or required) state (Kaufman & Zahn, 1993; McKillip, 1987). In comprehensive needs assessment, once these gaps or needs are identified, the evaluator must also identify and assess existing school and community services and other resources to meet those needs, develop priorities among identified needs, and determine which services should be maintained, altered, or newly developed.

A need also has been defined as a "value judgment that some group has a problem that can be solved" (McKillip, 1987, p. 10). In defining needs in this manner, McKillip (1987) underscores several important considerations for those who conduct needs assessments. First, since needs involve values it must be recognized that different people may perceive different needs for the same situation. It is also quite possible that those observing needs may differ from the person experiencing the need. It is not uncommon for service providers to differ from service recipients in reported needs. Second, since needs may emerge for a particular "group," this implies there is an environmental context that will require careful description to facilitate needs analysis. This is particularly important in identifying groups that may be "at-risk" for poor outcomes. Third, McKillip states that the definitional component of "problems" reflects an inadequate outcome that falls short of expectations. Last, recognition of a need implies a judgment that problems that are detected can be solved. Since problems may be created by multiple causes or factors, potential solutions must be judged by their probable efficacy in alleviating the problem, the general cost of the solution, and the feasibility and ease of implementation of the solution.

Bradshaw (1972) has developed four distinct conceptual approaches in defining and measuring need. These categories are labeled normative need, relative need, perceived need, and expressed need. This categorization is useful to needs assessment activities in that it offers multiple perspectives of need, as well as different but complementary approaches to comprehending need (Kettner, Moroney, & Martin, 1990).

A normative need implies the presence of some norm or standard, with need being evaluated against some standard. These standards are often set by experts, professional bodies, school boards, or governmental bureaus (Rothman & Gant, 1987). Normative expectations are particularly useful in program planning and involve areas where there is a lack of experience (McKillip, 1987). Although normative information may be advantageous in providing program planners with objective targets, a potential shortcoming with this approach is that norms or standards are subject to change.

Felt or perceived needs are what people think or perceive as their needs or expectations for service outcomes. Perceived needs are based on the presumption that individuals in the target population have insight into their own needs (McKillip, 1987). Nevertheless, program planners may discover ways in which services can be designed to be responsive to client needs. Unlike normative need where a single standard exists, with perceived need the standard changes with each respondent (Kettner et al., 1990). Thus, these data may be highly variable and individualistic. Once consumers are asked to report perceptions of their needs, expectations may be raised that program planners will implement programs that will meet their needs (Kettner et al., 1990).

An expressed need deals with the actual utilization of services. This approach provides an estimation of the percentage of people whose perception of need has been mobilized into action (Kettner et al., 1990). However not all people in need seek services. Since the main focus of expressed need involves the utilization of current services or programs, identifying only those services or programs can result in solutions that maintain the status quo (McKillip, 1987). Waiting lists, requests for services that do not exist, petitions, etc., are all indicators of expressed need.

Last, comparative or relative needs involve the comparison of one group with another. The disparity existing between the two groups is the criterion on which the existence and extent of need are established (Rothman & Gant, 1987). Unlike normative need, there is no standard benchmark but rather group comparisons. These comparisons could involve contrasts between elementary schools within the same school district or grade level differences within the same school building, with the revealed gaps between levels of services in these groups indicating need. Program planners who make group comparisons should be attentive to the unique sociocultural variables or environmental context among different groups to accurately explicate these differences.

As can be seen, all of these conceptualizations of need have distinctive features. In the following sections of this chapter, the reader will see that different methods of needs assessment emphasize certain conceptualizations of need. Given the limitations of each conceptual approach to need, multiple methods or techniques of needs assessment are often recommended to reduce bias in the identification of population needs.

Purposes of Needs Assessment for School Psychologists

The scope of a needs assessment can be very broad-based, such as at school district and/or community level, or much narrower in focus, such as at the school, grade, or department level. Despite the potential breadth of scope of needs assessment activities, there are several general purposes of needs assessment for school psychologists. As was previously discussed, needs assessment can serve as the foundation for program planning, development, and modification. Needs must be identified before they can be addressed by services. Needs assessment data may also provide information to decision-making bodies such as a school board to justify budgeting priorities. When a strong correspondence between allocation of money and other resources and needed services is observed, decision makers demonstrate strong accountability for their actions. Additionally, identified needs among a target population in a school district may justify funding requests for internal funding or external sources local, state, or federal grants. Furthermore, needs assessments may also be required as part of the funding request proposal.

Needs assessment can also be useful in promoting the professional development among school personnel. Training needs may be established and needs assessment information can aid in the design of staff development activities (i.e., inservice training) that are both relevant and appropriate to improving job functioning among school personnel.

Last, dissemination of needs assessment data may serve an important informative function with the schools and/or community. This can serve as the basis for school and/or community awareness of what the needs are and which courses of action decision makers are considering in their problem solving.

BASIC CONSIDERATIONS

School psychologists may become aware of problems in service delivery in a variety of different ways. Since the role of the school psychologist will vary considerably from school district to school district, they also will differ relative to their relationship with program planners. The conduct of needs assessments is broadly divided into three components: the planning, or pre-assessment phase; the data collection, or assessment phase; and the post-assessment, or dissemination of results phase.

Planning the Assessment Program

PRE-ASSESSMENT PHASE

One of the initial phases in conducting a needs assessment is to clarify the presenting problems or unsatisfactory state of affairs. According to Illback, Zins, Maher, and Greenberg (1990), these problem clarification activities are aimed at providing "systematic information to place the problem(s) in context and to assure that appropriate planning occurs based on a clear understanding of service needs" (p. 807). This contextual analysis provides initial data regarding the nature and scope of these problem(s). Methods that have been suggested in the literature to establish need include review of school documents, reports, and files, direct observations, and brief interviews with involved persons (Harrison, 1987; Illback et al., 1990). These interviews should be conducted with program planners, as well as a diverse sample of school personnel, to clarify the problem from different perspectives. These methods are used to determine what is already known about the needs of the system and to identify issues and major areas of concern (Witkin & Altschuld, 1995).

Another important dimension to the problem clarification phase is that it allows the school psychologist to estimate how receptive the school and/or community will be to change. The opportunity and commitment for program planning by key stakeholders must be present. Soriano (1995) stated that organizations undertaking needs assessments must carefully consider the changes they are willing and able to make based on the information obtained during the pre-assessment phase before new information is gathered. The initiation of needs assessment without the prior commitment to use data for planning purposes is a waste of time and resources and will likely result in conflict within the school (McKillip, 1998; Warheit, Bell, & Schwab, 1977).

ESTABLISHING A NEEDS ASSESSMENT TEAM

A needs assessment team is a working group that will be responsible for the planning, monitoring, and perhaps executing the needs assessment process. The size of group is dependent upon the nature and scope of the needs assessment effort, but usually not more than six people is a manageable size, particularly if the project is at the school level (National Urban League, 1983). Furthermore, it has been suggested that members of the needs assessment team be selected based on the criteria of familiarity and knowledge of the target population, community resources and institutions, and the organizational context in which the programs will operate (National Urban League, 1983).

The needs assessment team should appoint a director of the project. For purposes of this chapter, it is assumed a school psychologist will fill this role. Since this person will be required to oversee the entire project, he or she should have sufficient technical expertise and leadership skills to fulfill this function. The school psychologist is one of the few professionals in the school and most community agencies with measurement expertise and training in statistical and research methodology, evaluation, and testing procedures (Romualdi & Sandoval, 1995). Other members selected for the team should be individuals who work cooperatively in a group, are task oriented, are capable of making fair and objective decisions, and have a strong commitment for program planning in the area of demonstrated need (National Urban League, 1983).

Beyond personal characteristics, potential assessment team members should be considered from a variety of school and community institutions. This group may include students, teachers, parents, community leaders and decision makers, local university faculty, representatives from appropriate community agencies, school board members, school administrative level personnel, or principals. If the needs assessment is being conducted at the school level, then a representative from the Parent-Teacher Association or school advisory council should also be considered. The needs assessment team should have sufficient breadth of viewpoint to comprehend the problem and be able to assess the feasibility of different assessment approaches. The inclusion of members who are decision makers, such as principals for school-level assessments or school administrators/board members for district-level assessments, is necessary to build in commitment and political influence for program development recommendations based on the final needs assessment report. The needs assessment team may also recruit additional groups of stakeholders to aid in selected facets of the needs assessment if the workload is beyond the reasonable capabilities of the team.

Interest and commitment for the needs assessment may be high, but existing resources may be limited. Once the needs assessment team has been established, the scope of the needs assessment must be determined .The amount of resources available to conduct the project is an important determinant of the scope of the needs assessment. Practical considerations of budget and human resources will influence the method and level of information that can be gathered during the assessment process. At the same time, team members also need to evaluate the degree of technical expertise to carry out some of the tasks of the needs assessment. If none of the members has sufficient skills in research design, and data collection, and analysis, then the hiring of a consultant with these skills should be considered. Obviously, the hiring of consultants outside the school will require adequate financial resources. Alternatively, the assessment team may be able to recruit volunteers with these professional skills.

Frequently the school psychologist may be the only person available to conduct the needs assessment. In the absence of an assessment team, the school psychologist may solicit input from individuals using the same selection criteria used to choose members of the assessment team.

SELECTION OF METHODS

After the initial planning activities are completed, the assessment team must determine what information should be collected. Team members should specify critical issues to be studied and information that is necessary to understand them. The information to be gathered should be both quantitative (e.g., percentage of target group children not receiving a particular service) and qualitative (e.g., possible barriers to receiving such services). It has been suggested (National Urban League, 1983) that this information should be sufficiently specific to indicate the extent of the problems, influence on the problems, community resources available to deal with the problems, and hypotheses about potential solutions. The gathered information should not be so complex, however, that the assessment process becomes unmanageable, too time consuming, or beyond the resources or expertise available (National Urban League, 1983). If the assessment process becomes too burdensome in terms of time and energy, then it may delay or detract from program development and implementation activities.

Once the plan has been formulated, the committee should establish a timeline for completion of the needs assessment (Reviere & Carter, 1996). This time frame should span from planning activities to the dissemination of the results of the needs assessment. According to Reviere and Carter, a good plan should include how to cope with barriers that may emerge during the assessment process. When unexpected or difficult circumstances arise, needs assessors should be flexible and creative. While developed plans should be adhered to as closely as possible, those carrying out needs assessments may have to modify plans as necessary. A well-conceived plan maximizes the probability of quality information to be used in program planning.

BEST PRACTICES IN NEEDS ASSESSMENT

Once the pre-assessment phase is completed, the needs assessment process moves to the assessment phase, which involves data collection and analysis. There are a number of different commonly used methods to needs assessment. Each approach has its own set of advantages and disadvantages that will be addressed. Each method can be easily modified relative to the scope of the needs assessment (i.e., school level, school district level).

Resource (Program) Inventory

A resource inventory is a compilation of services available to the target group in a specific service area (McKillip, 1987, 1998). This information is typically gathered by surveying service providers in the local community and school district. The central aim of a resource inventory is to describe available services, with particular emphasis placed upon identifying who is providing services, the characteristics and eligibility criteria of clients receiving services, and the service capacity of the program. Programs are also characterized based on their geographical location and organizational setting.

Programs can also be described based on the utilization patterns of services offered by each program. The underlying assumption of this approach is that program participants are those in the population in need of services. Since utilization rates represent manifestations of problems that have already developed, they are not helpful in prevention planning (Rhodes & Jason, 1991). Since resource inventories detail programs that have already been implemented, conclusions based on data drawn from this method may provide a status quo, institutionalized orientation to program planning (McKillip, 1987).

An important outcome of a resource or program inventory is that it may reveal significant gaps in services as well as identify underutilized services. It may also identify services that were previously unknown to the needs assessment team (McKillip, 1998). Furthermore, it may discover that different agencies provide overlapping services. In times of limited resources and budgets within the schools, the reduction in the overlap of services will allow for the allocation of resources into other areas of need.

Resource inventories are generally quick and inexpensive to conduct and are commonly among the initial steps in a needs assessment. As we have seen, the resource inventory can provide certain levels of information for program planning. When considered alone, a resource inventory does not indicate need. Gaps in programming may exist because such services are not needed. For this reason, resource inventories should be supplemented with measures of the extent of the problem and potential demand for services (McKillip, 1987, 1998).

Social Indicators

The social indicators approach to needs assessment presumes that needs estimates can be inferred by considering selected social and demographic statistics that have been found to correlate highly with service utilization (Lewis & Lewis, 1983). These statistics are presumed to be "indicators" of need. Social indicators are particularly valuable in establishing "at-risk" populations.

Because many federal, state, and local agencies, including schools, are required to maintain statistical information (Illback et al., 1990), social indicator data are readily available through government publications summarizing census data and surveys. McKillip (1998) presents a comprehensive list of sources of social indicator data for the purposes of needs assessment. Key among these sources is the U.S. census data collected by the U.S. Bureau of the Census every 10 years. Currently, detailed demographic statistics of census data are available on CD-ROMs. Other useful sources of data mentioned by McKillip include the *Statistical Abstract of the United States*, the *State and Metropolitan Area Data Book*, and the *County and City Data Book*. All of these sources are published in book form and are available on CD-ROM (see McKillip, 1998, for more detailed information). Additionally, local governments, health organizations, schools, social services agencies, and law enforcement organizations may be important sources of indicator information. Depending on the problem area being addressed, information from these sources may include socioeconomic status, racial composition, educational levels, health status, housing patterns, family integration, prevalence of delinquency, suicide rates, school dropouts, drug and alcohol abuse, special class placements, achievement test information, and the like.

A distinct advantage of the social indicator analysis is that information is readily accessible and generally can be gathered inexpensively by those with limited research expertise or technical skills (Warheit et al., 1977). Advances in computer technology have made access to data sources even more efficient. Another advantage of the social indicator approach is that the local community or school district can be compared to other communities at the local, state, or national level. In very large school districts or in school districts in which individual schools serve very diverse populations, it may be very useful to compare schools on selected demographic, economic, educational, and social characteristics.

Despite the advantages of social indicator analyses, there are several limitations in this approach. Because this approach is inferential in nature, it assumes that certain social indicators are predictive of needs for services. To validate this assumption, substantial evidence based on the research literature and prior studies is essential. Data from large geographic areas may not pertain or generalize to smaller communities or rural areas of interest (Rhodes & Jason, 1991). Before rates can be compared, differences in population characteristics should be carefully considered. Although extensive indicator data are available, the form or extent of the assessment team's informational requirements may not be fully met. For example, the data you are interested in gathering about certain child characteristics is subdivided into age levels different than those you require. Can it be assumed that information for 6 to 16 year olds is a valid comparison with the 6 to 12 year olds in an elementary school?

School psychologists who use the social indicator approach to needs assessment must be vigilant to population shifts that may occur in the schools they serve. While social indicator information is reported over a long time interval, it is possible that some communities may undergo very rapid changes. For this reason, the initiation of an indicator analysis can provide baseline data on school or school district demographics characteristics to monitor change and help guide future needs assessment programs.

Surveys

Surveys are the most commonly used needs assessment methods. Surveys are very flexible in format and can be conducted as face-to-face interviews, phone interviews, or questionnaires with a wide range of respondents.

SURVEY METHODS

School psychologists interested in using surveys to assess needs must determine which method is most appropriate for their purposes. The selection of which methodology to choose is generally based on the intended scope of the needs assessment, the technical expertise available to conduct the survey, and the time and resources needed to complete the project.

If the number of persons to be surveyed is relatively small, then interviews are probably the most efficient means of gathering information. Therefore, needs assessments conducted at the school level usually lend themselves to the interview format. The success of interviews is largely a function of the skillfulness of the interviewer. The interviewer must be able to establish trust and convey empathy in order for the respondent to answer questions without feeling self-conscious or suspicious. Additionally, the interviewer must be able to keep the respondent focused on subjects pertinent to the needs assessment. If skilled interviewers are not available, then considerable time and expense can be incurred for training. Interviews provide in-depth information (Kaman, 1986); that is, a broad range of topics can be covered, including demographic characteristics, needs, feelings, desires, and solutions to the problems the respondent is experiencing. The interview also allows the opportunity to explicate questions and to probe ambiguous answers given by the respondent. Interviews are particularly well suited in surveying the needs of marginal individuals (McKillip, 1987).

There are several advantages and disadvantages in the use of interviews. Interviews can be very time consuming and expensive, and do not lend themselves to sampling large numbers of respondents. Given the cost of face-to-face interviews, phone interviews may be a reasonable alternative. Conducting phone interviews tends to be faster, but, generally speaking, establishing rapport tends to be more difficult. Research also indicates that the rate of refusal to participate is higher with phone interviews than with personal interviews (Warheit et al., 1977). Phone interviews may be the method of choice when interviews need to be conducted over a geographically dispersed region. In this instance, traveling expenses may make face-to-face interviews prohibitive. All of these issues have different levels of importance depending on whether the school psychologist conducts interviews at the school, school district, or community level.

Questionnaires are generally the preferred survey method when large numbers of respondents are required. If the items are highly structured, then the data are easily quantifiable. The development of an effective questionnaire requires a certain degree of technical expertise. There are a number of important considerations in writing questionnaire items. A basic assumption is that the questions will be understandable, elicit the desired information, and motivate respondents to participate. Several sources (Edwards & Thomas, 1993; Fowler, 1993; McKillip, 1987, 1998; Soriano, 1995) provide excellent guidelines on writing and formatting questionnaire items. Since it is beyond the scope of this chapter to provide an in-depth description of questionnaire construction, the reader is referred to these references. Some of the central concerns in questionnaire construction deal with assuring an appropriate readability level of items for the respondents, controlling for social desirability of responding, selection of open- versus closed-ended questions, and the use of ranking versus rating questions (McKillip, 1987).

Once items have been written, the next step should be to pretest or pilot the items. This is usually accomplished by asking a small group from the proposed sample to complete the questionnaire. After this has been completed, respondents are asked to critique questions and wordings to determine whether questions are providing the information for which they were intended. Failure to undertake item piloting may result in wasted time and resources. Poorly written and designed questions will also result in decreased response rates.

Questionnaires have a number of disadvantages. They can be quite costly when reproduction, transportation, telephone, and postage expenses are considered. Generally, respondent turnaround time is slow so that a significant amount of time may elapse before the completed survey is received. If the response rate is low, then considerable time and effort will be spent in follow-up aimed at increasing questionnaire completion.

Whether or not interviews or questionnaires are selected as the survey method, an important methodological concern involves sampling. When the objective is to estimate the frequency of need in the general population, a representative sample of that population is required. In instances where information about a specific subgroup is required, *purposive sampling* is the methodology of choice (McKillip, 1987).

KEY INFORMANTS AS RESPONDENTS

Key informants are presumed to be knowledgeable about the problem under consideration. It is assumed that because of the nature of their work or position in the school or community, they will have a good understanding of the needs of the target population. The assessment team makes the selection of the key informants. The scope of the needs assessment and the perceived problem area will help identify who are the key informants. For community-based needs assessments, individuals may be selected from the areas of public office, welfare and social service, law enforcement, religion, health, mental health, and education. Needs assessments at the school and school district level may include school administrators, principals, department coordinators, guidance counselors, school psychologists, special education teachers, nurses, or regular education teachers.

In initiating the key informant approach, the assessment steering committee should construct an interview schedule or questionnaire that permits those conducting the survey to obtain comparable data from each of the informants (Warheit et al., 1977). The committee should also select a single method of data collection. The most frequently used technique is the personal interview since it permits face-to-face contact, an open exchange of ideas, and has the best response rate (Warheit et al., 1977). Questionnaires and phone interviews, which result in lower response rates, can also be used effectively.

If the key informant approach is well planned and a diverse sample of key informants is used, then the needs assessment can result in a comprehensive impression of the needs of the school or community. The key informant approach has many advantages:

1. It is generally simple and inexpensive to conduct.
2. Assessment is based on professional judgment and actual experience with the problem (National Urban League, 1983).
3. Because many school personnel and community agencies are involved, these interactions can serve as the groundwork for cooperation and the development of coalitions between these agencies or groups.
4. It serves as the basis for effective program planning by creating organizational readiness for change and support initiatives in program development (Illback et al., 1990).

The key informant approach allows for the input of many people with different perceptions of the problem situation. However, key informants may be biased since their views are impressionistic and tend to see needs through their organizational perspective. Key informants may be unaware of some of the needs of those they serve or may not comprehend the needs of those who are unserved or underserved. It is for this reason that those who use the key informant approach should evaluate the adequacy of the number and type of informants used.

While the key informant approach has some inherent problems, it can be a valuable first step in the needs assessment process. It can help narrow the focus of the assessment by assuring that appropriate group meetings, questionnaires, and social indicator approaches are designed (Lewis & Lewis, 1983).

CLIENT/COMMUNITY RESPONDENTS

Survey methods can be conducted on a specified sample or the entire population. Information gathered in a school-based or district-based survey can provide valuable information regarding the (a) frequency of the problem or need, (b) demand for available services in the system, (c) client view points of the problem and needed services, and (d) acceptability of solutions to the problem. The most important advantage of this approach is that it *directly* assesses the problems and needs of the sample surveyed. Thus, the client/community survey can locate specific individuals or groups in need and determine the type of services required and desired by the population (Balacki, 1988). Demographic and other characteristics of the population in need can also be determined.

When surveys are conducted at the client/community level, they can raise expectations that schools will address the problem area. The survey process can be reactive in a positive way by marshalling support for program initiatives by the various groups of stakeholders.

Surveys at the client/community level can be quite costly and therefore are not cost effective to use when every new program or service initiative is being considered (Lewis & Lewis, 1983). It is probably best justified for the purpose of cyclical reassessment of changing schools needs. Appropriate sampling techniques can reduce costs. The main limitation encountered with client/community surveys is that they may lack a broad-based perspective of problem or need (National Urban League, 1983).

Structured Groups

Structured groups provide a supplement and alternative methodology to other needs assessment approaches already reviewed in this chapter. Structured groups can be the most "active and informative" approaches to needs assessment since they involve people in systematic problem analysis and discussion (Illback et al., 1990). Focus groups, nominal group technique, Delphi technique, and community forums will be discussed.

FOCUS GROUPS

Focus group methodology is a commonly used qualitative research approach used for exploratory or hypothesis generation, and confirmation of results from other needs assessment approaches. Focus groups are guided discussions intended to yield information on specific topics relating to feelings and beliefs about needs from a selected population (Sussman, Barton, Dent, Stacy, & Stag, 1991).

Focus groups are lead by a well-trained facilitator knowledgeable about the problem under study. To begin, the group is usually asked broad, open-ended questions about the problem with questions becoming more specific. The size of focus groups is usually 6–10 people. Homogeneous grouping is essential to allow free interaction among group members (McKillip, 1987). The criteria for selecting members (i.e., age, ethnicity) should be determined by the objectives of the study; however, several groups with varied characteristics may be involved to learn more about subgroups in the population (Ward, Bertrand, & Brown, 1991).

Focus groups may be viewed as being quite similar to open-ended interviews. Research, however, indicates that focus groups are frequently superior to individual interviews because of the "synergistic group effect" that results in more identified needs and solutions (Sussman et al., 1991). Focus groups are frequently used in conjunction with other needs assessment methods. Focus groups are useful in helping explicate differences between professional (key informant) and target audiences (clients/community members). Many needs assessors use focus groups to aid in the construction of questionnaires by identifying issues to be addressed in the survey and to determine terminology and phrases used by the target population to describe their needs and solutions to those needs. Focus groups can also be used to gather responses to conclusions generated from other needs assessment methodologies. This latter use may also lead to the production of solutions to the identified areas of need.

NOMINAL GROUP TECHNIQUE

The nominal group technique (NGT) was developed by Delbecq and Van deVen (1971) to overcome the common problems of group dynamics including domination of talking high status group members, non-involvement of reticent members, evaluation of ideas impeding idea generation, and group tendencies to get "off-task" from the agenda (McKillip, 1987). The NGT was designed to give individuals with disparate interests, capabilities, information, or influence more equity in the decision-making and priority-setting process (Lauffer, 1982). The term "nominal" describes the process of bringing groups together but minimizing verbal communication (Miller & Hustedde, 1987).

The NGT requires a well-trained group leader or facilitator. The group can be composed of key informants, clients, teachers, students, or service providers (McKillip, 1987). Although there are a number of variants in the NGT, most involve the following steps (Frankel, 1987; Miller & Husteede, 1987):

1. Facilitator of group presents a problem or question that is clearly defined (e.g., *How can we prevent school violence?*).

2. Each group member is asked to write down independently and silently as many solutions on a piece of paper or index cards. At this point, no discussion is permitted.

3. Each group member presents one solution or idea, one at a time in a round robin fashion. The facilitator records each idea on a flip chart until all are recorded.

4. After all solutions are recorded, they are clarified and evaluated through discussion.

5. Group members are asked to either secretly rate each proposed solution or to rank order their top five choices.

6. Ratings are tabulated and a summary of the results is presented.

7. If clear choices and/or priorities result from the vote, then the NGT is complete. In the event of no clear choices, additional clarification, discussion, and voting are undertaken until a clear choice is obtained.

8. The cycle is repeated for each problem or solution area.

The priorities established by the group may not be accepted by others in the school or community. To minimize this possibility, the needs assessor should develop a plan that has adequate representation among subgroups in the school or community.

DELPHI TECHNIQUE

The Delphi technique was developed to obtain group opinion from experts or individuals with exceptional knowledge about a particular subject area. This technique was developed at the Rand Corporation in the early 1950s to solicit opinion from military officials regarding the number of bombs needed in the event of war (Miller & Hustedde, 1987). Although educational decision making does not deal with such dire issues, the Delphi technique has been used successfully in school program planning activities. Recently, Jeffery, Hache, and Lehr (1995) adapted the Delphi method by using groups of children and parents, in addition to experts, to determine career counseling needs of children.

The Delphi technique typically starts with the assessment team determining which needs will be assessed, who will participate in the process, and how the information will be used. Based on the domains to be assessed, a questionnaire is developed and sent to a panel of experts.

The Delphi technique elicits expert opinion through the use of successive questionnaires administered to individual "panelists," selected on the basis of their expert knowledge or opinion (Lauffer, 1982). The process is designed to forecast or predict events when inadequate information exists. The format of the Delphi method is quite variable relative to the number of questionnaires sent to the panel. For most school applications, three questionnaires are probably adequate if using a panel of 8–12 experts.

Miller and Hustedde (1987) have outlined the basic steps in having panelists complete the series of questionnaires. In the first questionnaire, respondents are asked to answer questions regarding a problem situation. The questionnaire is returned to the needs assessment team and the distribution of responses is summarized. This summary then serves as the basis of the second questionnaire. Panelists are sent the second questionnaire and are requested to rank their concerns, to agree or disagree with the central tendencies of the group, and to clarify their judgments. The goal of the second questionnaire is to portray agreements and disagreements in priorities. A third questionnaire is then mailed asking respondents to reassess prior answers and to clarify their ratings relative to the group. They are again asked to vote by ranking the items listed on the questionnaire. This process is considered complete when there is general agreement among panelists. In the event of substantial differences among panelists, the questionnaire refinement-feedback cycle is continued. The central aim of the Delphi technique is to clarify problems and needs, not reach group consensus. Once the process is complete, respondents should be provided with a final report.

The Delphi technique is usually blended with other needs assessment techniques. It can be effectively used to avoid confrontation when severe disagreement is likely to emerge among experts (Lauffer, 1982). This technique may also be a cost-effective way of gathering expert information by avoiding the high cost of travel.

The Delphi technique requires that respondents have well-developed writing skills as well as a high level of motivation because no facilitator is present to help stimulate responses (Miller & Hustedde, 1987). Although the length of time to conduct a Delphi panel will vary as a function of the number of questionnaire mailings, it typically takes about 2 months to complete the process.

COMMUNITY FORUM

The community forum is similar to a town meeting in which the views and opinions of community members about their needs and problems are gathered. The community forum is appealing because it is generally easy to arrange and can be conducted inexpensively. The community forum can be easily adapted to the scope of the needs assessment in the schools. If the scope of the assessment is at the school level, then the forum can be held at an individual school while a district-wide needs assessment may involve a sample of schools or all schools within a given district.

To enhance the effectiveness of a community forum, a certain degree of planning is required. First, the needs assessment planning team should prepare questions designed to structure the meeting around the issues and, at the same time, provide sufficient flexibility to allow for spontaneous comments and candor among the participants (Warheit et al., 1977). The meeting should be highly publicized through advertising and the media and held at a convenient time and accessible location, because it is essential that a representative sample of the community attend. Early evening meetings at the local school in the community member's attendance area fit these criteria.

A leader for the forum should be appointed by the needs assessment team. This individual should have sufficient skills to keep the audience discussion on track. The leader must clearly state the purpose of the forum and explain any ground rules that will be used, such as time limits on talking by participants. In the event of very large turnouts for the forum, it may be necessary to divide the groups into smaller sections to facilitate discussion. Obviously, in these instances, several group leaders will be necessary. A person from the needs assessment team should also be present to record the proceedings of the meeting. The group leader may also wish to take a vote on priorities and concerns. A sign-up sheet for all participants should be used so that follow-up mailings can be sent to those attending the meeting.

The advantages and disadvantages of the community forum approach have been discussed extensively by several authors (Lewis & Lewis, 1983; McKillip, 1987, 1998; Warheit et al., 1977). The community forum is easy to conduct, quick, and cost effective. The community forum allows for input from many segments of the community. The needs assessor may, in fact, become aware of some highly unique or unanticipated needs when the source of information is directly from potential service recipients. The community forum builds rapport and trust with the community and can enhance community members' commitment to program planning. It also identifies citizens who may be valuable resources for the later implementation of programs.

The validity of data gathered from a community forum will largely be a function of the representativeness of the group. Only a partial view of the community's needs or problems will be portrayed if the group is not representative of the general community. It is quite common for community members with severe problems or impairment not to attend a community forum. The forum leader must keep participants focused on the agenda, or else the meeting will degenerate into a gripe and grievance session. The forum leader must also avoid the meeting becoming controlled by special interest groups who wish to espouse their viewpoints, at the expense of not allowing others to offer opposing or different viewpoints. Similar to other needs assessment methods, the community forum raises expectations that something will be done to solve problems or to satisfy unmet needs.

The community forum is frequently used in needs assessment activities in the schools and is commonly used in conjunction with questionnaires to assess the "believed" needs of the community. The community forum approach is impressionistic and assumes that citizens are aware of and knowledgeable about their own problems and needs.

Selection of Needs Assessment Methods

As this chapter illustrates, needs assessment methods vary considerably in terms of their comprehensiveness, cost, and time necessary to complete the project. Some believe that cost and time should be held to a minimum so as not to interfere with other goals in the program planning process (Hobbs, 1987; Steadham, 1989). In performing needs assessments, no component is more important than the clear specification of the purpose and what you wish to accomplish in the needs assessment. The purpose and who you wish to influence are the most central criteria in choosing methods (Hobbs, 1987). There are a number of additional criteria to consider when choosing a needs assessment method. These include the resources required and available for needs assessment activities, the skills of the needs assessment team, characteristics of the client system, preferred methods of the decision makers, and the allowable time frame for the needs assessment project (Steadham, 1989).

Since all needs assessment methods have inherent strengths and limitations, many needs assessors have advocated the use of multiple methods. By adopting this strategy, the potential limitations of one approach can be minimized by the use of an additional, complementary method. Multiple activities will also help estimate the reliability and validity of the results of the needs assessment. Thus, the use of multiple methods in the needs assessment will increase accuracy and decrease bias with the final results (Jeffery et al., 1995).

Communication of Needs Assessment Findings

Once the needs assessment data are collected and analyzed, the post-assessment phase begins. A successful needs assessment provides information, via reliable and valid methods, that will be used for program planning, development, and modification (Aponte, 1983). The effective communication of the results of the needs assessment to decision makers is important because it will determine if the findings are used for program planning (McKillip, 1987). Decision makers will act upon needs assessment information only when they can understand the findings and see a clear connection between the needs assessment results and program planning. The needs assessment team must devise a plan for addressing how to communicate the findings to various audiences and how to make the results as meaningful as possible (Carter, 1996). According to Carter, the most common and effective means of communicating findings is the written final report.

The scope and framework of the final report of the needs assessment depends on the audience to be addressed. The communication must fit audience interests, keeping in mind that they are busy and often unsophisticated about research methodology (McKillip, 1987). Modifications in the report may be necessary in instances where the needs assessor will report the findings to several audiences with divergent interests. While needs assessors focus on the results of the project, program planners are concerned with the organizational consequences of their decisions (Aponte, 1983). The findings should be reported to correspond to the questions raised by the decision makers who most likely commissioned the needs assessment. Equally important is the timely presentation of the needs assessment results. If too much time has elapsed in the process of conducting the needs assessment, then the final report may include outdated information or issues that are no longer a priority with decision makers.

The findings of the needs assessment can be presented in written and/or oral form. Warheit et al. (1977) and Carter (1996) have suggested the following outline for the needs assessment report:

1. Executive Summary
2. Statement of Problem
3. Historical Background
4. Methods
5. Findings
6. Recommendations

The written report should provide information about the study from its inception to completion (Carter, 1996). Written reports should be as concise as possible and should not be overly lengthy. Reports should be free of jargon or technical terms and provide only necessary information that will facilitate decision making. Poor grammar, typographical errors, and the like should be avoided because they will detract from the credibility of the report. The visual display of the findings also tends to facilitate clarity and understanding.

If an oral presentation is used, then the needs assessment team must be sure that the presenter will be articulate, knowledgeable, and enthusiastic about the findings. Oral presentations should be supplemented with handouts of the major findings of the needs assessment. Overheads or slides are also a useful means of avoiding information overload by audience members. A distinct advantage of the oral presentation is that it allows for personal contact with the exchange of information and occurs at a specified time (McKillip, 1987). Written and oral briefings are typically combined in needs assessment activities.

Many needs assessment efforts fail to plan adequately for the post-assessment phase. Amodeo and Gal (1997) lamented the failure of their organization to utilize the findings of their needs assessment in program implementation. They attributed the lack of utilization of their findings to a variety of factors that could have been avoided. First, they felt that too much time was spent in data collection, and as a consequence decision makers felt a sense of urgency to implement programs without waiting for the needs assessment findings. Second, many stakeholders in the organization viewed the needs assessment as an end in itself and failed to see a connection between the results and recommendations for change in program planning. Third, insufficient time was provided to decision makers to reflect upon the findings of the needs assessment report. In their case study, the decision makers had not had ample opportunity to review the written report before its oral presentation. This latter finding underscores the importance of keeping the decision makers apprised of the progress of the needs assessment through the use of interim reports from the planning team. Communication with administrators also informs the needs assessment team of organizational changes within the school or agency that may affect conduct and focus of the needs assessment.

The likelihood that the school or organization accepts the recommendations generated by the needs assessment report will be enhanced if the proposed changes are based on factual data from the needs assessment, are rank ordered by time-cost benefits, are achievable, reflect the best-interests of the school, and have the highest potential for resolving the need (Warheit et al., 1977). Once priorities are established by the needs assessment team and/or decision makers, action plans should be developed that require commitment from leaders within the organization (Altschuld & Witkin, 2000). Thus, the responsibilities of planning activities are shifted to stakeholders within the organization.

SUMMARY

This chapter sought to describe the process of how to plan and conduct needs assessment in schools. A number of different needs assessment methodologies were explored, with the strengths and limitations for each approach discussed. Needs assessment serves as the foundation on which programs in the schools are designed. As schools become increasingly involved in reform and restructuring activities, school psychologists will need system-based skills such as needs assessment. While school psychologists have substantial skills in measurement and research methodology, few have received training in needs assessment. Clearly, training programs will need to prepare students in this area to meet the changing role responsibilities of many school psychologists (Romualdi & Sandoval, 1995). Depending on the resources available in the school districts in which they work, school psychologists can play an active role in contributing their unique skills to needs assessment activities.

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This book provides a comprehensive overview of focus groups, including how to conduct groups, how to recruit participants, how to manage special subgroups, and how to report results. The appendices are particularly useful and provide samples of focus group screener questionnaires, discussion guides, and executive summary reports.

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This book is among the best sources available on how-to-do surveys. There are particularly helpful chapters on sampling, item writing, interview methods, data analysis, and the ethical issues involved in survey research. This is an indispensable source for school psychologists interested in using surveys for research or program development.

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This is an easy-to-read book dealing with the problems associated with organizational change. The author provides a step-by-step analysis of facilitating change with particular emphasis on how to overcome resistance to change and how to institutionalize change. The book contains many useful forms to evaluate the various steps in the change process.

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Chapter 5 discusses the Delphi method and presents several actual applications of this method.

National Urban League. (1983). *A guide for developing non-instructional programs*. New York: Author. (ERIC Document Reproduction Service No. ED 272 597).

This reference provides an excellent step-by-step guide in designing school programs. It includes major sections on needs assessment program planning, program implementation, and program evaluation. The authors, using their experiences with *Follow Through* programs, provide an actual case study on program planning.

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A concise guide to conducting needs assessments. The chapters on survey construction and sampling are particularly helpful. An appendix includes a needs assessment guide with a checklist of steps aimed at professionals with little experience in needs assessment activities.

Warheit, G. J., Bell, R. A, & Schwab, J. J. (1977). *Needs assessment approaches: Concepts and methods* (Publication No. ADM-77-472). Washington, DC: Department of Health, Education, and Welfare.

This publication continues to be one of the key sources on how to conduct needs assessments. The authors, using a community emphasis, provide many practical suggestions including how to form a team, select methods, construct questionnaires, do sampling, and supervise a needs assessment team. This book has stood the test of time and serves as an excellent introduction to needs assessment.

20 Best Practices in Working in Full-Service Schools

Jayne E. Bucy, Adena B. Meyers, and Mark E. Swerdlik
Illinois State University

OVERVIEW

As we begin the twenty-first century, school-age children and adolescents face significant challenges to their physical, academic, social, and emotional development (Paavola et. al, 1995). A variety of risk factors to the healthy development of this age group are increasing (Minke & Bear, 1997; U.S. Department of Heath and Human Services, 1999). These biological risk factors include prenatal damage from exposure to alcohol, illegal drugs, and tobacco; low birth weight; difficult temperament; or an inherited predisposition to a mental disorder. Environmental risk factors include such factors as poverty and deprivation; abuse and neglect, parental mental health disorders, and exposure to traumatic events; and unsatisfactory parental relationships owing in part to an increasing divorce rate. The resulting single parent homes, typically headed by women, are the most vulnerable socioeconomically. An alarming increase in the death rate among young people ages 10–24 owing to brain injury from automobile accidents, homicide, suicide, and HIV-AIDS also challenge the healthy development of our children and adolescents.

A number of stressors also influence the daily lives of our students and challenge their healthy development. These stressors include changes in family work patterns with the increasing number of two-parent families in which both parents are employed outside of the home, and the large number of parents who are teenagers themselves. Young people also face the more common stressors of reading difficulties, low achievement, aggression, bullying, fears, peer rejection, social skill deficits, and loneliness. Extensive national publicity has highlighted the deadly violence in our schools, which adds to the stress of students. Also, many students engage in binge drinking and unsafe sex, putting themselves at risk of developing serious health problems.

Many of our students have no health care because their parents are uninsured, yet these stressors and risk factors exist for them. There is a strong link between education and health: A student who is unhealthy will not benefit from even our best schooling. Many of the health problems noted above (e.g., HIV-AIDS, suicide), have behavioral causes. The "cures" for these illnesses rest with education; that is, teaching people the necessary skills to cope successfully with stressors both now and for the future (see Gutkin, 1995; Swerdlik, Reeder, & Bucy, 1999)

The consequences of these risk factors and stressors are seen in the statistics related to mental disorders in children and adolescents. Up to 21% of children and adolescents, aged 9– 17, have a diagnosable mental or addictive disorder associated with at least minimum impairment. Roughly 4 million children and adolescents suffer from a major mental illness that results in significant impact at home, at school, and with peers (U.S. Department of Heath and Human Services, 1999). On the basis of these data, it is more important than ever to provide comprehensive and integrated educational, mental health, medical, and social services.

The full-service school (FSS) concept represents a convenient service delivery system for students and their families to access needed intervention services,

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provide prevention programs, and facilitate learning for all students. In addition to meeting the medical and mental health care needs of children, FSSs have the potential to support the educational mission of schools. By providing services in a non-categorical manner, children's needs may be addressed holistically and without the gaps and overlaps frequently experienced with categorical programs (Adelman & Taylor, 1997; Flaherty, Weist, & Warner, 1996).

The call for integrated and comprehensive models of services delivery, including FSSs, has occurred at many levels. The federal government has advocated for integrated and comprehensive service delivery through a variety of legislative initiatives such as Healthy People 2000 of 1990 and the 1994 Goals 2000: Educate America Act, which encouraged high performance standards, academic achievement, and intervention based on many of the social and health-risk behaviors enumerated above. At the state level, legislation such as Healthy Start in California includes funding for comprehensive and integrated models of service delivery. A number of national organizations for physicians, nurses, teachers, social workers, guidance counselors, and psychologists (APA and NASP) are stressing the importance of comprehensive and integrated school health services (Reeder et al., 1997; Dwyer, 1996).

School psychologists, who are aware of the benefits and challenges of functioning in the unique service delivery system of the FSS, represent highly valued and unique contributing members of a FSS's professional services staff. The goal of this chapter is to provide information and resources to facilitate the school psychologists' entry into and effective functioning within a FSS.

BASIC CONSIDERATIONS

Elementary and secondary schools that integrate a variety of expanded services are referred to as FSSs. Dryfoos (1994, p.142) defines a FSS as one that "integrates educational, medical, social, and/or human services that are beneficial to meeting the needs of children and youth and their families on school grounds or in locations which are easily accessible." The ideal FSS has administrators, teachers, school counselors, social workers, school psychologists, physicians or nurse practitioners, and other professionals working together to provide one-stop service delivery for students and families (Drotar, 1993). Some FSS are further described as school-based (services offered on school grounds) while others may be school-linked (services offered nearby, though off-campus) (Reeder et al., 1997).

Since their initial inception, FSSs have rapidly increased in number and location. According to the National Survey of School-Based Health Centers (Making the Grade, 1999) less than 100 FSSs existed prior to 1980. By 1990 there were 200, and rapid increases in the 1990s resulted in an increase to 1157 by 1998. While FSSs were initially found in the northeast, they are now located in 45 states and the District of Columbia. Once concentrated in urban areas, FSSs are increasing rapidly in rural areas, accounting for as many as 26% of all centers. FSSs serve children of all ages, with the largest proportions in high schools (38%) and followed by elementary (33%) and middle schools (16%).

Roles for School Psychologists in FSS

Interventions for mental health issues is the most common service provided by FSSs (Making the Grade, 1999), with a quarter of all visits resulting in a mental health diagnosis. Despite this, school psychologists may not be called upon to address this area of concern. In a survey of full service schools, Bucy et al. (1999) found that school psychologists often play a limited role in providing mental health services and are not included as clinic staff. Instead, mental health services are offered by social workers, clinical psychologists, and psychiatrists.

A variety of specific roles and functions have been described for school psychologists working within FSSs. Reeder et al. (1997) note that school psychologists may function as leaders or members of interdisciplinary teams or as university-based consultants. Others (e.g., Adelman & Taylor, 1993; Talley, Short, & Kolbe, 1995) have described a number of direct and indirect services that school psychologists and other mental health professionals can provide within the FSS context. These include relatively traditional activities such as psychological and educational assessment and intervention planning. In addition, there are new roles such as assisting with the creation of developmentally appropriate health education curricula; designing and implementing new prevention programs relevant to medical, mental health, or educational objectives; securing funds for expanded services to students and families; and a variety of professional development activities for school and agency staff.

The special characteristics of FSS settings require expanded conceptualizations of the roles of all relevant professionals, including school psychologists. Specifically, school psychologists working within FSS settings may find that their roles (a) address a range of physical and mental health issues; (b) emphasize preventive activities; (c) are more interdisciplinary and thus demand more collaboration with students, parents, community members, and other professionals; (d) include opportunities for program development and grant writing; and (e) involve a variety of basic and applied research activities.

EMPHASIS ON PHYSICAL HEALTH AND MENTAL HEALTH

In their efforts to meet the needs of children and families in a comprehensive and holistic manner, FSS settings typically offer an expanded array of health-related services. School psychologists can contribute to these efforts in a variety of important ways. For example, drawing upon recent advances in the fields of pediatric psychology, health psychology, and behavioral medicine, school psychologists might collaborate with medical personnel to address behavioral aspects of health problems including chronic pain, medication noncompliance, or stress-induced somatic complaints (Kubiszyn, 1999). They might also offer health promotion or stress management interventions to school staff or parents (Talley et al., 1995). Furthermore, school psychologists can collaborate with physicians, nurses, teachers, and parents in the development and implementation of evaluation protocols for psychopharmacological interventions (Brown, Dingle, & Landau, 1994).

Many school-based and school-linked clinics, originally established to provide medical and family planning services, have evolved to address mental health issues to a significant degree as well (Weist, 1999). This has occurred, in part, in response to student need. It is estimated that only 40% of children with serious emotional disturbance receive mental health services of any kind, and that many drop out of treatment prematurely (U.S. Department of Heath and Human Services, 1999). It is therefore not surprising that a large proportion of the students seeking services at school-based and school-linked clinics present with psychosocial concerns (Adelman & Taylor, 1999). As a result, school psychologists working in FSSs may be called on to help coordinate, supervise, or provide a range of mental health and counseling interventions. To meet the often overwhelming demand for mental health services that can arise in this context, group counseling, classroom-wide interventions, and large-scale prevention efforts are often warranted.

PREVENTIVE SERVICES

By linking health, educational, and social services, the FSS implicitly recognizes the multidirectional links among physical and mental health, behavior, and environmental factors. This perspective is consistent with a public health approach to service delivery, in which preventive services play a prominent role (Albee & Gullotta, 1997). Preventive interventions, particularly those that would be categorized as primary prevention (Caplan, 1964), differ from more traditional service delivery models in several important ways. First, whereas traditional health and mental health services are provided to people who are already experiencing symptoms or problems, primary prevention targets entire communities or populations. "Primary prevention is a community concept. It involves lowering the rates of new cases of mental disorder in a population over a certain period by counteracting harmful circumstances before they have had a chance to produce illness (Caplan, 1964, p. 26)." Second, preventive interventions seek to promote healthy outcomes as well as reduce unhealthy ones, acknowledging the role of protective factors and strengths as well as risk factors and deficits. Third, preventive interventions attempt to identify environmental causes and solutions to problems, instead of focusing exclusively on individual or intraorganismic factors. Finally, many preventive interventions emphasize the role of behavioral and emotional functioning in the development and maintenance of physical health problems.

Given these defining features of the primary prevention approach, it seems that school psychologists working in FSSs are ideally positioned to develop and implement preventive interventions. As school-based professionals, they have access to entire populations of school-age children, not only those who are experiencing symptoms or problems. They can use their knowledge of environmental risk and protective factors to develop effective interventions, and their position in a collaborative setting with links to families and communities may aid in their efforts to address these contextual factors. Additionally, school psychologists can apply knowledge of behavior change methods to help students reduce risky behaviors (such as unprotected sex, substance use, and violence) and increase healthy ones (such as nonviolent problem solving, assertive communication, and healthy diet and exercise habits). A variety of empirically supported preventive interventions addressing these and other medical, mental health, and educational concerns have been described elsewhere (e.g., Albee & Gullotta, 1997; Minke & Bear, 2000).

COLLABORATION

By definition, FSS services are interdisciplinary. Professionals from various fields such as medicine, nursing, social work, special education, regular education, school counseling, and psychology must work together to provide truly coordinated services to children and families. Adelman & Taylor (1999) describe this model of integrated and comprehensive service delivery as the generalist approach, in contrast with the more typical problem-specific and discipline-focused specialist approach. Professionals working in FSSs will likely assume more of a generalist role than may be the norm in other settings. They must be prepared to collaborate with other professionals whose educational backgrounds, communication styles, service priorities, and ethical concerns are unfamiliar. Furthermore, in truly comprehensive FSS models, this collaboration must extend beyond other school-based professionals to include staff at off-site agencies, parents, and other members of the community. As Reeder et al. (1997) and others have pointed out, school psychologists may be able to use their consultation skills and knowledge of group process to help facilitate these collaborative relationships.

PROGRAM DEVELOPMENT AND GRANT WRITING

FSSs provide unique opportunities for school psychologists to participate in program development and innovation. This is especially true for school psychologists in leadership or administrative positions. Ideally, school psychologists would be involved in the development of school-based or school-linked services from the beginning (Reeder et al., 1997). Even within an existing FSS, the school psychologist might take on administrative and supervisory functions that involve creation of new programs or service delivery models. In order for such innovations to be implemented and maintained, school psychologists must be prepared to identify and pursue outside funding sources.

BASIC AND APPLIED RESEARCH

Although school psychologists, especially at the doctoral level, have extensive training in research design and methodology, survey results indicate that research endeavors comprise only a small fraction of practitioners' professional activities (Reschly & Wilson, 1995). However, school psychologists working in FSSs may be called upon to conduct applied research to monitor and improve the quality of services provided. These activities may include needs assessments to identify service priorities and available resources, as well as program evaluations to assess the processes, outcomes, and cost effectiveness of the services provided. Moreover, in this context of innovation, some school psychologists may be able to conduct the type of systematic, controlled research that Fairweather & Davidson (1986) describe as community experimentation. In this way, the theories behind various approaches to intervention and service delivery may be tested, and new knowledge about human development may be generated (Bronfenbrenner, 1977).

Challenges and Barriers

As school psychologists strive to fulfill these new role expectations and function optimally in FSSs, a number of obstacles and challenging situations are likely to arise. These include ethical dilemmas, role strain, reimbursement and funding concerns, community relations, and difficulties with the collaborative process itself.

ETHICAL DILEMMAS

Ethical dilemmas regarding such issues as confidentiality and informed consent are a source of ongoing challenge for school psychologists working in FSSs. Protection of client confidentiality becomes complicated in any integrated service delivery model, especially if multiple agencies are involved. School psychologists providing mental health services to students may feel pressure to share information about the course of counseling with teachers, guidance counselors, and other team members. Decisions about how much or even whether such information should be shared may be quite difficult. Additionally, when counseling services are provided within a school, client confidentiality can be jeopardized because of the small size of the client base. Students may quickly learn where the counseling office is, and may observe other students coming and going. In group counseling scenarios, group members may be acquainted with each other and with each other's friends outside of the group. In this context, confidentiality breaches by group members can be particularly detrimental and yet at the same time quite difficult to control. If third parties are billed for mental health services, then client confidentiality is further compromised.

Special attention must also be given to the procedures and policies for obtaining informed consent for mental health services provided in a FSS. In general, when health and/or mental health services are provided to minors, informed consent must be obtained from parents. Legally, there are some exceptions to this, such as counseling in crisis situations. Also, some states have laws allowing adolescents to consent to services on their own behalf. In situations in which informed consent is to be obtained, questions remain as to whether this consent must be active (i.e., requiring a signed permission form) as opposed to passive (i.e., informing parents of the services and allowing them to refuse). In the case of some school- or classroom-wide preventive interventions, the answer is unclear. It is even less clear in the case of children who are wards of the state, or with so-called *adolescents on their own* (Armbruster, Andrews, Couenhoven, & Blau, 1999) who may not have any contact with their parents. Evans (1999) argues that parental consent should be obtained for all school-based mental health services (even low-risk, preventive, school-wide interventions) and that active consent is preferable to passive consent. He acknowledges, however, that following these conservative guidelines will result in the denial of needed services to some troubled children.

ROLE STRAIN

In the effort to provide comprehensive services to all students, schools and practitioners may find themselves over extended. The move toward a generalist model of service delivery is appealing in many respects, and is more cost-effective than a fragmented specialist approach, but coordination alone cannot solve the problem of scarce resources. Schools often find that even after instituting FSS programs, many unmet student needs still exist. As Adelman and Taylor (1999) point out, "Even when one combines community and school assets, the total set of services in economically impoverished locales is woefully inadequate" (p. 146). At the level of the individual practitioner, the more flexible and expanded role opportunities in the FSS provide an exciting avenue for professional development, but can also be overwhelming, leading to feelings of stress and exhaustion. Depending on the practitioner's prior training and experience, the generalist approach may bring pressure to work outside of established areas of professional competence. Conflicts of interest may also arise owing to the assumption of multiple roles.

REIMBURSEMENT AND FUNDING ISSUES

The question of funding brings with it a number of potential problems and challenges as well. Carslon, Tharinger, Bricklin, DeMers, and Paavola (1996) point out that traditional, categorical funding mechanisms push services toward fragmentation, thus impeding efforts to coordinate services for children. Also, FSSs often experience the problem of "projectitis" (e.g., Adelman & Taylor, 1999), in which school or agency resources are allocated to specially funded projects, only to find that the projects are soon abandoned because the funding has run out. Many school-based and school-linked clinics are moving toward collaborations with Managed Care Organizations (MCOs), including Medicaid MCOs (Armbruster et al., 1999). While MCOs are potentially good sources of funding, these organizations have requirements related to credentialing and documentation that may be quite unfamiliar to school psychologists and other school-based professionals. Also, MCOs usually require information about diagnoses and treatment progress that raise confidentiality concerns, especially in the case of adolescent clients who may not want their parents to know about the services they are receiving.

COMMUNITY RELATIONS

An optimally functioning FSS must be supported by parents and other community members. Garnering such support may be difficult in communities where mental health services are regarded with suspicion or where parents already feel alienated from the educational system or from social and health service agencies. Unexamined cultural differences between FSS staff and community members may compound these problems. Even in communities where a majority of parents support the mission of the FSS, more marginalized groups, such as so-called difficult to reach parents, may be less supportive, indicating that the resources available through the FSS are not maximally effective for all intended recipients. In addition to the challenging task of forging positive relationships with parents, practitioners working within FSS may run into problems if the community as a whole, and community-based service agencies in particular, are not supportive. The relationship between school- and community-based service agencies must be thoughtfully and collaboratively negotiated.

THE CHALLENGE OF "TRUE" COLLABORATION

Many of the barriers and challenges that are unique to working in FSSs stem from the need to collaborate effectively with others. Minke (2000) describes true collaboration as a process that entails crossing traditional boundaries, sharing resources, and developing common goals. This is a tall order, especially among diverse professionals who are accustomed to a more specialized approach to service delivery. Minke argues that many school-based and school-linked services exemplify failed or incomplete efforts at true collaboration.

FSSs must be seen by teachers as more than pull-out programs that disrupt instructional time. Teachers are a source of referral for children experiencing difficulties in educational, social, familial, and medical areas. As stakeholders in the program, teachers must become actively involved in the development and implementation of FSSs. Many barriers exist to their full participation including weak links between teachers and FSS staff, differences in training levels (graduate versus undergraduate), disciplinary professional jargon, different standards of ethical behavior, pay scales and work culture, and issues of turf and territorialism (Jehl & Kirst, 1993; Crowson & Boyd, 1993; Waxman, Weist, & Benson, 1999).

LOCATION

Currently, there is no agreement on the most desirable location for integrated health and educational services (Dryfoos, 1994). FSSs can be classified as either school-based or school-linked (Talley & Short, 1995). There exist advantages and disadvantages to each configuration.

The school-based model has all services provided in the school building. The advantage of this model is that services are provided in proximity to students and educators, increasing access to services and facilitating collaboration among professionals. Limitations of this model include limited physical space for added services and the bureaucratic complexities associated with providing medical and social services on school grounds (see Reeder et al., 1997).

The school-linked or community services model provides the services off-campus, typically in a hospital or clinic. The main advantage to this model is greater access to medical and social service providers. Limitations include lack of interaction/integration with educators including teachers and administrators, the expense and inconvenience of traveling for students and their parents, and an emphasis on acute or referral care rather than on prevention (see Reeder et al., 1997). Although, theoretically, there is an expected difference between services offered and location of service delivery, there is little difference in the types of services provided, types of professionals employed, or the role of the school psychologist (see Bucy et al., 1999).

FUNDING

FSSs are typically funded by multiple sources (Reeder et al., 1997; Bucy et al., 1999) including public health funds that originate from the Center for Disease Control (CDC) and are distributed through state public health agencies. Additional funding can be secured through state and federal grants and third-party reimbursement, most commonly Medicaid or MCOs (Armbruster et al., 1999). Funding for prevention activities may be obtained through legislation such as the Anti-Crime Bill of 1994 and the Administration on Children, Youth, and Families, as well as from the Department of Health and Human Services. Private funding sources including private citizens, the Robert Wood Johnson Foundation, and the Hogg Foundation fund a number of FSS projects (DeMers and Bricklin, 1995; Carlson et al., 1996). In some states, private hospitals have established and staffed school-based health clinics.

If school psychologists are to play a significant role in FSSs, and be reimbursed for their services, then they need to negotiate their participation at the time the FSS is conceived (Reeder et al., 1997). They should be at the table when the initial funding is allocated. To be involved early in the development of a FSS, school psychologists should also serve on state level committees, develop networks with health constituencies, and actively pursue funding sources (see Leviton, 1996; Petraitis, Flay, & Miller, 1995).

BEST PRACTICES

Elements of Successful Collaboration.

Effective collaboration with parents, students, community members, and other professionals is integral to the success of the FSS movement. As noted above, difficulties inherent in the collaborative process are responsible for many of the obstacles that practitioners in FSS settings are likely to encounter. Although there is a dearth of scientific evidence about the elements of effective collaboration, a number of thought-provoking scholarly and theoretical discussions on the topic have recently appeared (e.g., Minke, 2000; Sarason & Lorentz, 1998).

Minke (2000) presents a model of collaboration that provides useful guidelines for practitioners struggling with this very challenging aspect of service delivery in the FSS context. The model identifies four "CORE" elements of collaboration, including Connection, Optimism, Respect, and Empowerment. Connection implies the existence of constructive, trusting, and mutually dependent relationships in which conflict is not avoided or minimized but viewed as a strength and used productively. Optimism in considered necessary for sustained effort in the context of this challenging process. It encompasses not only a positive outlook, but also generous assumptions about the intentions and efforts of others, combined with an unwillingness to blame individuals for system-level failures. Respect includes acceptance of difference, willingness to learn from others, and recognition of each collaborator's expertise. Empowerment involves the development of true partnerships among collaborators, including those who may be accustomed to more hierarchical relationships (such as administrators and students). Each participant is assumed to have existing strengths as well as potential for developing new skills.

As they strive to resolve dilemmas and overcome challenges in their new roles, school psychologists working in FSSs are encouraged to consider these CORE elements of collaboration. For example, decisions about how to handle confidentiality and informed consent should be made in consultation with students, parents, and colleagues. Each of these groups should all be represented on advisory boards responsible for setting policies about service delivery. Conflicting opinions may be voiced, but these differences should be embraced rather than avoided. The outcome of a process that thus respects diverse perspectives will likely be superior to one based only on the views of the most powerful stakeholders.

Some barriers to gaining teacher support may be eliminated by providing teacher training that includes team building, understanding service coordination, and training teachers to recognize a fuller array of child mental health problems (Bucy, 1994). Teachers should be included on governance boards. Program evaluation should include academic outcome measures and teacher feedback. Activities that promote a sense of ownership and participation, common planning times, and strong and vocal administrative support from superintendents and principals will encourage teacher involvement.

Problems related to role strain may also be reduced through improved collaboration. Optimistic collaborators in a resource-poor setting would avoid blaming each other for the system's inability to address all students' needs. This attitude might foster a more productive climate in which creative solutions could be developed and implemented. Consistent with the notion that everyone has strengths and can learn new skills, resources may be developed through collaboration with community volunteers and paraprofessionals. Any supervision that is provided should be empowering rather than hierarchical. That is, it should be aimed at increasing the supervisee's competence and not keeping him or her in a subordinate role. Related to this, a collaborative practitioner who believes that new skills can be learned and is willing to learn from others should be comfortable seeking out and accepting supervision to avoid operating outside of his or her areas of competence.

The CORE elements are also integral to collaboration with parents and community members. Trusting relationships must be developed, in which different perspectives are embraced and different types of expertise are acknowledged. Respectful collaboration also implies that before implementing new programs, parents and community members must be consulted to make sure that the proposed services are responsive to the community's needs and consistent with its goals and values.

Training Needs

Continuing education and pre-service training activities may enhance school psychologists' ability to function optimally in FSSs by addressing three broad goals: expand the range of services that school psychologists are trained to provide (including such activities as health education, prevention, and early intervention), expand school psychologists' view of their role to be more consistent with the generalist model, and increase school psychologists' ability to collaborate effectively with other professionals, students, parents, and community members.

Tharinger (1995), argues that the specialties of health psychology, community psychology, clinical psychology, and school psychology are all relevant to the emerging roles for psychologists in the FSS context. Consistent with this, school psychologists may benefit from expanded coursework in these areas. Specifically, some background in health psychology would help prepare school psychologists interested in contributing to health education and behavioral management of medical problems; some background in clinical psychology might be useful for school psychologists interested in providing psychotherapy to students and families in school-based clinics; and some background in community psychology would be relevant to the development of preventive interventions, and would complement school psychologists' knowledge of strategies for consultation and collaboration.

Training experience including practicum and internship settings that involve collaboration with other professionals and with parents and students would help prepare school psychologists to effectively engage in these activities. Coursework that provides information about other professions (such as ethical guidelines) might also be useful. Adelman & Taylor (1999) argue that discipline-specific training is one of the barriers to a more generalist approach to service delivery. Training programs that take an interdisciplinary collaborative team approach are described by Papa, Rector, and Stone (1998). These teams, which include health and education personnel, share common courses related to health issues and primary care of children and join each other in clinical placements in school-based and community health centers. There may be greater employment opportunities for those with broader training.

To take on leadership roles in FSSs, school psychologists, particularly those at the doctoral level, must expand their skills even further. Training or experience in program administration including program planning, budgeting, personnel management, and information systems management will prove necessary to develop and administer FSSs (Illback, 1994). Many of these opportunities are already available to school psychologists who administer pupil personnel or special education services within school districts.

SUMMARY

Today's school recognizes the interrelationship of a child's education and his or her medical and mental health. To be fully effective in the twenty-first century, schools must be able to address the needs of children beyond the 3 R's. FSSs, offering comprehensive, integrated services, address many of the barriers to education that are experienced by children today. School psychologists have much to contribute to full service schools in the areas of prevention, intervention, collaboration, program development and administration, and research. The school psychologist is uniquely trained to provide many of the needed solutions to the challenges accompanying the FSS model.

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ness and school completion. Each chapter describes several intervention strategies and reviews evidence about program effectiveness.

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Focuses on the conceptualization of full-service schools, three specific roles that school psychologists might play, training needs, and obstacles that must be overcome to function effectively in this type of service delivery system. Roles of the school psychologist that are emphasized include team member, coordinator of the team, and university-based consultant.

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Describes psychology's contribution to school health and why health care should be an integral part of the school setting. A listing of the services that can be provided by school health centers is included, as is a listing of relevant resources.

WEB SITES FOR SCHOOL-BASED HEALTH CLINICS

These sites link to many useful resources and provide opportunities to network with others working in school-based health centers. Newsletters are also published by many of these organizations with subscription information available on website.

Making the Grade: www.gwu.edu/ mtg

National Assembly on School-Based Health Care:
www.nasbhc.org

Bureau of Primary Health Care's Healthy Schools, Healthy Communities:
www.bphc.dhhs.gov/hshc/HSHCfact.htm

UCLA Center for Mental Health in the Schools:
http://smhp.psych.ucla.edu/

21

Best Practices in Promoting Educational Reform at a School District Level

C. Ben Barbour
Horry County Schools, Conway SC

OVERVIEW

Educational change can be viewed as a continuum of implementation ranging from macro to micro. Macro changes at a systems level can come from national and state legislative directives while micro changes at the Local Education Agency or district level are often referred to as new initiatives and/or policy changes. Macro changes tend to be sweeping and all-inclusive. Such changes at the national level would include the Education for all Handicapped Children Act of 1975 (P.L. 94-142) and its progeny the Re-Authorization Act of 1997. An example of macro changes at the state level is Kentucky's Education Reform Act, which adopted new state standards, and South Carolina's Education Accountability Act of 1998, with its emphasis on assessment and standards alignment with measurable results.

While macro changes often are initiated by enactment of laws or in response to broad-front litigation, changes at the district or LEA level (micro) often can be traced to activity initiated at an individual, departmental, or school level. This activity can be viewed as reform from the inside out and tends to encourage current practices becoming more streamlined and responsive to meeting the needs of students. It also offers the opportunity for school psychologists to adopt the role of systems change agents (Knoff, 2000) and problem solvers (Deno, 1995).

What follows is a review of lessons learned from one district's attempt to change from a special education system that places emphasis on issues such as eligibility, specific criteria for placement, and indirect measurement to a system that places emphasis on meeting the needs of the student. While still an ongoing metamorphosis, knowledge gained through the limited implementation of a different model has been put to use immediately within existing structure to benefit all district students.

BASIC CONSIDERATIONS

Historical Context

Why would any LEA want to explore different avenues for implementation of an alternative service delivery model? In the case of this district, two factors led to the recognition that desired outcomes were not being obtained by existing procedures.

The first factor was general dissatisfaction by the special education administrative team with the prereferral process in place at the time. The process in place, known as the Student Assistance Team (SAT), had started years before with the best of intentions. The purpose of SAT was to help teachers develop interventions for student improvement and to act as a process rubric for students deemed in need of referral for special education determination. Unfortunately, the process deteriorated into a rubber stamp for entrance into special education services. It became simply something one "had" to do to get a student evaluated. Internal yearly audit information indicated that increasing numbers of students were being referred through the SAT for psycho-educational evaluation, and only about half were qualifying. This trend represented a questionable allocation of the district's school psychologists' time and produced a dilemma in justifying the continued district use of outside contract testing. Clearly, the process was not accurately predicting or producing appropriate candidates for special education consideration. In addition, the audits indicated that SAT interventions existed more on paper than in practice. By definition an intervention has both a direct instruction and progress monitoring component. Few, if any, of the interventions typically listed through SAT met this criterion. Also, interventions were almost identical for each student going through the process, regardless of the student's presenting problem.

A second factor that came into play was a result of a meeting with Dr. Dan Reschly, of Vanderbilt University, who was presenting to the spring conference of the state association of school psychologists. Reschly spoke on "School Psychology: Demise of the Old Time Religion and the Emergence of a New Paradigm" (Reschly,1998). He proposed a macro shift in traditional practices and thinking. Such practices and ideas include beliefs such as (a) disabilities viewed as being inherent in the individual, (b) the identification and treatment of underlying causes, (c) advocating unique treatment methods by disability, (d) advocating unique teacher training by disability, and (e) assessing aptitude to prescribe treatment. The proposed replacement paradigm called for a shift toward increasing use of functional assessment, a call for non-categorical entitlement with mildly disabled students, initiation of data-based decision making, and increased promotion of research-validated interventions.

These two factors occurring in a similar time frame acted as a catalyst for change. The decision to look at an alternative approach for delivering services to students did not evolve from a "big bang " organizational mandate. Instead, the idea of re-formatting what the district was doing evolved incrementally over a series of informal discussions among various professional staff members.

To help clarify for the district what a functional needs-based problem-solving model would look like, Dr. Reschly was contacted and subsequently came to the district and presented ideas over a 2-day period. Both school psychologists and administration personnel were asked to attend and to participate in a dialogue for further clarification. Individuals from state organizations, and higher educational institutions, other school districts, and the state school psychology association were invited so participation would be representative. Over the subsequent spring months, planning took place regarding the formation of a problem-solving team concept to replace the previous pre-referral team structure. A somewhat tentative and rather ambitious notion of moving toward a non-categorical approach vis-à-vis the identification and placement of special needs students also came under discussion.

The events that occurred from the spring of 1998 to the present are the subject of the rest of this chapter.

Infrastructure

The decision to move toward a non-categorical problem-solving model was based on a firm conviction that the district's students (regular and special education) would be the primary beneficiaries of a system that reversed the sequence that was being practiced. Instead of focusing attention on evaluation and eligibility issues at the front end of the process, why not try to meet the presenting needs of the student first and have entitlement or eligibility issues addressed later as an integral component of the overall model and dependent on the outcome of the earlier problem-solving efforts?

Identified necessary steps toward implementation of a new model included the following:

1. Securing permission from district superintendent

2. Development of new problem-solving team approach with emphasis on early data-based interventions

3. Incorporating a different measurement technology for progress monitoring purposes

4. The development of local norms for standardization purposes

5. Committing to increases in staff development and gaining staff cooperation.

6. Request to the state's Department of Education for permission to enact rules replacements (exceptions)

PERMISSION

The first step was accomplished by meeting with the superintendent, director of special education, and assistant superintendent for learning services. Permission was secured to explore this different model with the understanding that procedural safeguards and due process rights would continue to be honored and protected. This was not a difficult permission to obtain since many of the advantages of working in a problem-solving model coincided with district aims and philosophy. The district's insistence on and commitment to the idea that all students can learn proved useful for obtaining a favorable decision.

STUDENT STUDY TEAM

The second element identified as a critical component was the development of a Student Study Team (SST) based on the problem-solving model. There are numerous variations of problem-solving models referenced in the literature (Ysseldyke & Marsten, 1998). Generally they all have three basic components of (a) formulating or defining the problem, (b) generating and selecting potential solutions, and (c) testing the selected alternatives. The model adopted incorporated facets from such states as Kentucky, Iowa, Ohio, Florida, and Pennsylvania. This study team approach would not be solely a pre-referral approach and would be implemented over a 2-year period to include all K–5 schools in the district. The distinguishing features included the following:

1. A focus on problem-solving, but not as a mechanism for referring students to special education evaluation

2. A focus on modifying the environment to assist students

3. A focus on assessment of what the student knows and can do, and not on weaknesses

4. An assessment that is very functional and diagnostic in nature and can be performed by teachers

5. Interventions that are based on data and research

6. A personalized intervention or learning plan developed using a meaningful intervention connected to data generated from informal assessment

7. A personalized intervention with a monitoring and evaluation component to determine effectiveness

8. Problem solving with basically four levels of involvement
    - Informal parent conferences
    - Informal consultation with additional professionals both in and outside of school
    - Formal consultation with SST and development of intervention plans as needed
    - Consideration for programs such as Special Education or 504 designation.

MEASUREMENT

Measurement for progress monitoring and local norm development was derived from the Basic Skill Builders Program (Beck, Conrad, & Andersson,1995), which incorporates the direct measurement system developed by Dr. Ogden Lindsley and is known as the Precision Teaching model (Lindsley, 1972). The Basic Skill Builders program is a collection of 1-minute probes or Skill Builder Sheets that can be used to assess present academic or behavioral levels of functioning. The measurement guidelines accompanying the program allow for data-based instructional and curricular decision making. When used in conjunction with standards alignment or the development of local norms, the program offers a wealth of information based on direct assessment with a minimum of time invested. This skill building model can be used in conjunction with other instructional approaches "as long as these approaches have some evidence of effectiveness" (Beck et al.,1995.)

LOCAL NORMS

The development of local norms is a critical variable when attempting to shift to a problem-solving model with its emphasis on curriculum-based instruction and curriculum-based measurement. Mark Shinn's (1988) work was a valuable reference vis-à-vis creating and implementing local norms. An out-of-district statistician was contracted to consult for the first set of assessments. It was decided that the assessment team would be composed of 12 individuals, and a demographic study indicated that the best composite sample, based on several different criteria, were four K–5 elementary schools. All classes were general education classes. Three team members were assigned to each school, and the assessment lasted three consecutive days. One class per grade level in each school was assessed by using previously selected 60-second probe sheets in grade-appropriate academic areas.

The number of academic probes per grade ranged from four to eight. The academic probes were aligned with district standards. After 3 days of assessing each of the four schools, the results were collated and tabulated. The results were sent to the statistician. The final results produced a Spring Quarter set of norms that could be used for reference and standardization purposes. Since the initial assessment, Fall and Winter Quarter norms have been added that complete the cycle.

STAFF DEVELOPMENT

The need to commit to extensive staff development was realized early. In the spring and late summer of 1999, two teams representing the district went to Marshalltown, Iowa (Area Education Agency 6). The first trip was for fact-finding, and the team was composed of school psychologists, learning specialists, and special education administration personnel. The purpose was to get more information about creating and implementing a non-categorical problem-solving model. Iowa has had this type of model in place and working for almost a decade, so Iowa was a logical place to start the learning process. The training was composed of presentations by various Area Education Agency 6 staff members regarding history and evolution over the decade. District representatives were given ample opportunity to ask questions and discuss projected problems or obstacles.

The second trip to Area Education Agency 6 was in late July 1999. A team composed of school psychologists and one special education administrator was allowed to participate in a 5-day training session offered for new personnel and others connected to the area education agency. Training centered on performance monitoring in the problem-solving approach. Daily activities stressed such items as problem identification, data review, collaborative consultation, measurement strategy, current levels of performance, discrepancy determination, problem analysis, goal statements, intervention strategies, goal monitoring graphs, implementation components, intervention plan options, and entitlement.

The training and practices learned in Iowa were incorporated into the district's procedure manual for implementation. The new skills learned in Area Education Agency 6 were interwoven with the basic district components already underway: the SST, use of a new measurement system, new skills in curriculum-based instruction, and the development and use of local norms.

Additional skills needed when working with a functional approach were deemed necessary. Dr Ken Howell of Oregon was invited to present a workshop on curriculum-based instruction. When incorporated with the growing database of options under a problem-solving model, such as the SST, the district felt confident about its ability to provide additional quality services to students.

Some personnel reorganization was necessary to ensure that the district would be able to monitor the transition to the SST as well as lead the staff development for implementation of the non-categorical project. A school psychologist was asked to head staff development for the SST, in particular, and the other special projects in general.

Request for Rules Exceptions (Replacements)

In late spring of 1999, the district sent a written proposal to the state's Department of Education requesting three exceptions from the current state special education regulations be granted. States are required to report to the federal government the numbers of individuals served by category. However, from a federal point of view, it is not required that an individual child be labeled with a specific disability for that child to receive special education services. The federal government permits other ways of meeting the state reporting requirement. The federal government has been permissive in the ways that states have been allowed to meet the breadth of the mandate. As Tom Hehir, past director of OSEP, stated in a policy letter (Hehir, 1995):

> Part B does not require States to label children. The definitions of "children with disabilities" at 34CFR300.7 must be used by States to prepare annual data reports for the U.S. Department of Education regarding the number of children in the state receiving "special education" and "related services" under the Part B program requirements. The Department has no objection to a State's use of categories, which differ from those specified in Part B, or, if it elects, the use of a non-categorical approach so long as those children eligible under Part B are appropriately identified and served.

Congress codified OSEP's long-held position on labels with the passage of Individuals With Disabilities Act 1997. The critical passage from the statute reads:

> Nothing in this act requires that children be classified by their disability so long as each child who has a disability listed in section 603 and who, by reason of that disability, needs special education and related services is regarded as a child with a disability(IDEA 97 612(a)(3)(b)).

By using the above information as a springboard, the district asked for three rule replacements to the state special education regulations then in effect. First, in the area of evaluation, the district asked for a rule exception of the comprehensive evaluation requirements as they related to the definition of Learning Disabled (LD) and Educably Mentally Disabled (EMD) within the current state guidelines in order to reflect the proposed problem-solving assessment. The classifications of LD and EMD combined accounted for approximately 68% of the district's mildly disabled special population. The specific request related to intellectual testing and standardized testing instruments. The district proposed to replace this method with a comprehensive problem-solving model of practice. Instead of outlining specific tests or procedures that must be completed in every case, a general structure of data collection to be applied in every case would be delineated. Second, in the area of identification, the district requested that non-labeling of mildly disabled students (LD and EMD) be allowed. The request would allow the district to "entitle" students who have a mild disability and who are not in need of an alternative curriculum without labeling. While a disability label would not be used, the district would identify the characteristics of the student, needs of the student, intervention strategies to be used, the procedures to be used to monitor the success of the intervention, and the level of parental involvement. Such students would be considered as "entitled" to special education services.

The last rule exception dealt with the area of delivery of services (teacher/pupil ratio). The district requested the ability to eliminate current maximum class size for resource and eliminate the requirement of minimal average of resource time per day and replace with amount of time determined by individual child instructional needs (minimum 250 minutes per week). The district would replace the existing requirements with new caseload controls based on the educational needs of students rather than on actual head counts of students. Also, the amount of time would be determined by the individual child's instructional needs (no more than 66 contact hours per teacher).

The information was submitted to the state's Department of Education, Office of Exceptional Children, in May 1999. In essence, the district was asking for permission to pilot three K–5 schools using the problem-solving model with the non-categorical provisions. The district offered to have outside contract testing performed with a traditional psychoeducational battery for parity purposes. For every student in the pilot schools who met entitlement criteria, the district would also have the same student evaluated independently for quality assurance purposes and in keeping with the experimental nature of the project. The response came in late September 1999. While generally positive about the district's willingness to search for innovative approaches to meeting students' needs, the response in effect asked for further clarification and additional input.

Within 2 months a request was made again to the state's Department of Education asking for a meeting to permit district personnel to present the proposal in person. A date was mutually agreed upon for mid December 1999. Chosen individuals from the district made a short presentation and responded to questions. A promise was made that the district would get a response in January 2000.

A response dated January 7, 2000, arrived at the district and gave a carefully worded consent to the district's proposal for establishing three pilot schools for a non-categorical problem-solving approach to meet students' needs. While filled with many conditional statements, their response did offer to allocate grant funds to defray outside contract testing expenses to the district. A probation period of 6 months with written progress monitoring reports was mandated along with insistence on safeguarding the due process rights and guarantee of FAPE as outlined in the IDEA. There would be appointed a linkage or monitoring person/agency to ensure safeguard compliance and facilitate communication. The first annual visit and presentation of site data was scheduled for spring 2001.

Two of the district's school psychologists who had received the Iowa training from Area Education Agency 6 were chosen to lead the SSTs in the three pilot schools. One would lead the SST teams in two of the schools while the other school psychologist would take the other SST leadership role. The respective faculties had been inserviced since the beginning of the school year and were familiar with the different features of a non-categorical model. Implementation began in the three pilot schools during the month of February 2000.

THE ROLE AND FUNCTION OF SCHOOL PSYCHOLOGISTS

Although the pilot implementation has not been operating very long, there have been some measurable changes in the way the two pilot school psychologists distribute their time during the day (see Table 1).

Table 1 indicates that these school psychologists spend significantly more time leading general education teams in problem solving and significantly less time in administering traditional psychoeducational evaluations. One of the interesting aspects of going to the SST concept has been the 50% decrease in referrals for "special education testing." Of the SST referrals that are forwarded on for special education evaluation, 80% are qualifying. This would indicate that the referrals through SST are of higher quality relative to the predecessor SAT, with a better chance for eligibility consideration. Another interesting feature seen in Table 1 is the time spent in direct observation and development of behavior and academic intervention plans. Direct consultation with teachers and parents is noticeably higher in terms of time invested.

By the spring of 2001, there will have been over a year of data collection that it is hoped will show the efficacy of using a non-categorical problem-solving approach to meeting students' needs. Teacher, administration, and parent surveys will be administered to assess what works and where the district needs to improve. Questionnaires assessing role and function satisfaction of the two school psychologists involved in the pilot project will be administered twice during the 2000–2001 school year.

BEST PRACTICES

In retrospect, the largest pitfall was produced by a lack of clear communication during the early period (spring of 1998) when the model was being explored and discussed. This violated the admonition given by Jeff Grimes and David Tilly to "communicate, communicate, communicate!" when implementing educational change (Grimes & Tilly, 1996). The result of not communicating the district's intentions led to the need for

Table 1. **Comparison of how a school psychologist's time was spent during a "typical" month under the rule replacements pilot program versus the traditional school psychology model**

Activity	*Time spent under the rule replacements pilot program, minutes*	*Time spent in traditional model, minutes*
SST meetings	1215	345
Individualized Education Plan meetings	105	210
Special education staffings	1065	1860
Re-evaluation review meetings	120	285
Consultation with teachers	900	615
Consultation with parents	420	255
Consultation with administrators	105	540
Consultation with counselors	none	90
Direct observations	675	75
Indirect observations	180	none
Administering precision teaching probes	1320	195
Traditional psychological evaluations	120	1950
Developing and implementing behavior intervention plans	255	45
Developing and implementing academic intervention plans	75	none

several "call" meetings to straighten out the misunderstandings and relieve some anxiety about jobs and role/function fears. The school psychologists as a group were most affected, and the district had not clearly articulated its intentions regarding how this new model might actually affect them. After a series of meetings, the district could more clearly convey the idea that, if approved, the project would have pilot/experimental status and would only involve two of the school psychologists who had received out-of-state training. There would be no sudden reversal of roles for anyone, and there would be no reduction in the number of school psychologists. While group anxiety is now abated, better communication from the district in the formative stages would have prevented misperceptions and created a more positive atmosphere.

SUMMARY

Throughout this chapter, an attempt has been made to trace the reform efforts of one district. While these efforts may be characterized as ongoing and as a work in progress, the attempt at a paradigm shift in how special education services are delivered at the district and school level has been revealing, particularly as it relates to role and function of school psychologists. The call to move beyond basic gate keeping activities can be traced back several decades. In recent years, articles have appeared showcasing the school psychologist as a "problem solver" and a "change agent." Innovative practices include taking a leadership role in crisis management teams, working via indirect service applications to affect more students more effectively, encouraging more research activities at the individual practitioner level, and emphasizing preventative measures in dealing with discipline issues at a school and district level.

The opportunity to move beyond a strict psychometric role appears to be on the rise across the country. Nevertheless, it is ultimately the individual practitioner's decision as to how best to redefine traditional activities and accommodate an augmented role—if at all. In transitioning to a problem-solving model over the past 3 years, the change in activity for the school psychologists associated with the rules replacement pilot project has been quite publicly noticeable. As outlined in Table 1, there has been a definite time re-allocation as the pilot school psychologists move to more consultative and indirect applications of service delivery. Additionally, these school psychologists have more opportunity for enhancing a leadership role since they are observed engaged in assessment activities in the classroom itself. The numerous consultations with both teaching staff and administration tend to promote a new perception of how school psychologists utilize learning theory applications to benefit students as well as to provide ongoing staff development to both regular and special education teachers.

The decision to transition to a problem-solving model at a district level was based on several beliefs, some of which have been articulated previously (Tilly, Reschly, & Grimes, 1998) and can be encapsulated as follows:

1. Use of the problem-solving model in special education service delivery delivers effective data-based assessment and decision-making in an efficient manner.

2. All students can learn and be educationally successful.

3. The primary purpose of problem solving is to solve problems by designing effective individual interventions.

4. Problems affecting student performance do not exist exclusively within the makeup of learners but occur as the result of an interaction between learner characteristics and the educational setting.

5. The effectiveness of a solution cannot be determined prior to implementation. Therefore, solutions must be implemented, monitored, reviewed, and changed as necessary.

6. Problem-solving procedures are best applied as part of a school-wide effort.

7. A problem is not defined as the difference between a learner's potential and achievement but as the discrepancy between the demands of the educational setting and the learner's performance in the setting.

8. Owing to the nature of the problem-solving model, alignment with district/state standards and initiatives is comparatively simple and aids in documenting accountability.

On the basis of their training, school psychologists have a wonderful opportunity to assert a strong leadership position within a problem-solving approach. If "best practice" can be defined as doing what is right for the child, then it seems reasonable that a district can focus its collective experience, collective intelligence, and collective beliefs to improve the educational prospects for all students.

AUTHOR NOTES

I am pleased to acknowledge the contributions and continuing efforts of the school psychologists and administrative visionaries who believe positive systemic educational reform can occur if we remain steadfast to the goal of improving the futures of all students. The following school psychologists are recognized for their integral support and dedication to this project: Tom Jenkins, Tom South, and Te'Anne Cahill. Thanks are extended for the administrative guidance and building-level support of Dr. Gerrita Postlewait, Dr. Brenda Tanner, Mollie Laut, John Robinson, Leon Hayes, David Powell, and David James. A special thank you goes to Dr. Sam Broughton of Francis Marion University for his literature review and editorial assistance. Thanks also to Meg Torrens for her technological assistance.

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22

Best Practices for School Psychologists in Educational Accountability: High Stakes Testing and Educational Reform

Jeffery P. Braden
University of Wisconsin—Madison

OVERVIEW

Educational accountability, high stakes testing, and educational reform are major concerns for U.S. schools. School psychologists can help schools respond to accountability mandates, high stakes testing, and educational reforms. This chapter is designed to empower school psychologists to partner in schools' efforts toward accountability and educational reform by reviewing the educational accountability and reform movement, the stakes associated with assessments, students with disabilities in accountability programs, and specific activities school psychologists may consider to help schools with accountability, high stakes testing, and reform.

THE EDUCATIONAL ACCOUNTABILITY AND REFORM MOVEMENT

The educational accountability movement is an historical reaction to growing public concern about the success of U.S. schools. Publication of *A Nation at Risk* (National Commission on Excellence in Education, 1983) nearly a quarter century ago spurred a movement toward public accountability for schools. The public accountability movement shifted public emphasis from interests in equal educational opportunities (e.g., the 1960s War on Poverty) to emphasis on educational outcomes (Ravitch, 1999). The 1988 Education Summit, called by President George Bush and chaired by then-Governor Bill Clinton, led to the development of national educational goals (e.g., National Education Goals Panel, 1995) defined in part in terms of student performance on educational tests. Both political parties also adopted platforms opposing "social promotion," or the promotion of students to higher grades based on age rather than demonstrated academic accomplishment.

As a consequence of pressure to improve student outcomes, federal education funding entitlements added requirements that states adopt challenging educational standards and provide evidence that schools within the state were continuously improving student performance. The Elementary and Secondary Education Act (ESEA) and the Improving America's Schools Act (IASA) require that states adopt standards for what students should know and do, and have some mechanism for monitoring students' progress toward those standards. As a consequence, all 50 states have adopted educational standards and a standardized approach for measuring student learning. The most common form of these standardized measures is the group-administered standardized achievement test (*Education Week*, 2001). These tests are typically administered in elementary school (third or fourth grade), middle or junior high school (eighth grade), and high school (ninth or tenth grade).

Standards-Based Educational Reform

Educational accountability requires that the public establish the outcomes desired from schools, and then measure progress toward those outcomes. The logic of standards-based educational reform is that, by publicly and clearly communicating to educators, students, parents, and the public what students are to know and do, and by measuring how well students meet these goals, success can be recognized—and low performing schools will be encouraged to change (reform) their educational practices to improve student outcomes. Thus, standards and assessment are at the heart of the educational reform movement (Ravitch, 1999; Thomas B. Fordham Foundation, 1998).

There are two major types of standards: student standards and opportunity to learn standards. Student standards establish what students should know and do. There are three types of student standards:

1. *Content standards* are typically subject matter specific (e.g., language arts, mathematics), but are broadly stated so that they define performance that spans a large range of complexity and levels of performance.

2. *Performance standards* are more specific than content standards, and linked to specific grade levels. These standards attempt to describe what students should know and do at various points (e.g., fourth, eighth, and twelfth grades).

3. *Proficiency standards* state how well students must perform to be judged proficient, or meeting the standard. Proficiency standards may be defined by cut scores on tests, rubrics for judging student work, or other operational definitions of student performance.

Each of these forms of standards is complementary. Content standards establish what students should know, performance standards establish what students should do, and proficiency standards establish how well students must do to be judged as meeting the standard. In many states, performance and proficiency standards are used interchangeably, creating two forms of student standards: content and performance (Cizek, 1998). Also, some states use "benchmarks" instead of "performance standards" to define the criteria by which educational stakeholders should define student success.

Opportunity to learn standards (OTL) establishes the supports students need to acquire high levels of academic proficiency. OTL standards are intended to hold educators, schools, districts, administrators, and the public accountable for providing children the opportunity to acquire challenging academic competencies. Unlike student performance standards, federal law does not require states to monitor and enforce OTL standards; they are optional (Porter, 1995). Thus, states are required to establish and to show continuous improvement on student performance measures, but states are not required to establish and enforce OTL standards. OTL standards have, to date, played a much less direct role in encouraging educational reforms, despite efforts to clearly define what the public should expect from all educational stakeholders (Education Commission of the States, 1998). Instead, the focus of standards-based educational reforms and accountability falls primarily on measures of student performance (*Education Week*, 2001).

Measures of Student Performance and Educational Accountability

There are many measures of students' academic proficiency. Most measures are standardized (so that testing conditions and educational demands are common across all settings and districts), fairly brief (so that they do not take much time), and aligned to state standards (so that they are credible indicators of proficiency in the standards) (Cizek, 1998). Unfortunately, various aspects of educational accountability systems are confused, and terms are often used inappropriately (see the resources in Appendix A for glossaries and primers on assessment of student achievement). Therefore, it is useful to separate the measures educators use to assess student performance, the methods used to analyze data from those measures, and the consequences attached to the results of the measures.

MEASURES OF STUDENT PERFORMANCE

Standardized, selected-response tests are the most common method for measuring student performance in educational accountability systems. Several states supplement standardized tests with essays, but only seven do so for subjects other than language arts (*Education Week*, 2001). Two states use portfolios (Kentucky and Vermont), and some others include on-demand performance assessments, standardized teacher ratings, and other forms of educational assessment. However, all states use assessments (whether selected- or constructed-response) that are standardized, so that methods for collecting, evaluating, and reporting student performance data are constant across students, schools, and districts (*Education Week*, 2001).

It is important to be precise in using terms related to assessment. For example, many educators believe the phrase "norm-referenced test" describes an assessment consisting solely of multiple-choice questions whose item content is determined solely by normative item characteristics, rather than academic standards or content. This is unfortunate, not least because it is the score—not the test—that is referenced to a norm (see next section). Also, the three major standardized achievement tests (i.e., the Iowa Tests of Basic Skills, the Stanford Achievement Test-Ninth Edition, and the TerraNova) use item content aligned to national or state standards, and include short-answer and brief essay items or prompts (Cizek, 1998). Furthermore, these standardized achievement tests are designed to measure skills and reasoning, rather than just knowledge. For example, a social studies test is more likely to provide a map, and then ask questions such as, "What is the most populous city shown on the map?" or "Which city is most likely to be a hub for imports and exports?" than to ask questions such as, "What is the capital of Sri Lanka?" or "In what year did the U.S. Civil War begin?" Likewise, reading tests use multi-paragraph passages of original literature as a source for questions. Unfortunately, many educators are unaware of these test features, because they often presume "norm-referenced tests" are composed exclusively of multiple-choice items that demand recognition and regurgitation of arbitrary information.

REPORTING OUTCOMES OF LARGE-SCALE ASSESSMENTS

The results of accountability measures are most often reported in criterion-referenced or standards-referenced scales (Cizek, 1998). That is, rather than reporting student performance relative to a norm (e.g., percentiles, normal curve equivalents), most states describe student performance relative to proficiency standards. Consequently, student performance is typically described in four to five categories relative to proficiency standards. For example, Florida defines student performance with five levels (i.e., little success, limited success, partial success, success, and success with the most challenging standards), and describes student scores with four categories (i.e., Minimal Performance, Basic, Proficient, or Advanced). Most states define proficiency levels by developmental scale scores, which are based on item response theory. Developmental scale scores form an equal interval scale, with an (estimated) true zero point. These form a scale that allows for measurement against an absolute standard. Scores from different test levels can be placed against this common standard.

School psychologists should not confuse developmental scale scores with the scaled scores produced by most psychoeducational tests. Whereas scaled scores are arbitrarily fixed to the mean of a distribution, developmental scale scores are fixed to an estimated "true" zero point. Scaled scores are similar to Fahrenheit and Celsius scales, which fix zero to an arbitrary point, whereas developmental scale scores are like the Kelvin scale, which fix zero to a point estimated to be "true" or absolute. This allows tests to report how students are doing across different versions of a test in the same scale (e.g., a developmental scale score of "645" reflects the same estimate of competence whether it is earned on a third grade or sixth grade version of a test). For this reason, most states define proficiency levels by developmental scale scores, not norm-referenced scores. Achievement tests also produce norm-referenced scaled scores, called "normal curve equivalents" (NCEs). NCEs are fixed to a mean (50) and defined by a standard deviation (21.06); the odd value for the standard deviation is selected so that NCEs of 1, 50, and 99 match percentiles of 1, 50, and 99.

Although large-scale tests can report student scores in norm-referenced terms (e.g., NCEs, percentiles), they can also report student scores in criterion-referenced terms (e.g., scale scores, proficiency levels). For this reason, avoid the term "norm referenced test" to describe standardized achievement tests. It is the score, not the test, that is referenced to a norm (or criterion). Just as the number of pushups a person does can be described with respect to norms (more or less than average) or a criterion (meets, does not meet, exceeds the standard), likewise the performance of a student on a test can be described with respect to norms or criteria. The test (e.g., pushups) is neither norm nor criterion referenced; rather, it is the score or performance that is linked to norms or criteria. The distinction between tests and results being described relative to norms or criteria is important, because criterion-referenced descriptions of performance allow states to measure progress regardless of normative changes. For example, if the average level of student achievement dropped steadily over a decade, half of the nation's students would still be above the mean. Conversely, if the average level of student achievement improved, half of the nation's students would still be below the mean. For this reason, most states have eschewed norm-referenced scores (e.g., grade equivalents, national percentiles) in favor of proficiency standards that are linked to a zero point fixed independent of the national mean.

How do states decide where to set proficiency standards? Most states set proficiency standards using a bookmarking procedure. (See Appendix A for an on-line example of bookmarking.) In this procedure, groups of people with content and grade-level expertise (usually subject matter teachers recruited throughout the state) review the entire bank of possible test items across all testing levels (e.g., K–12 grade forms of the test). The easiest test item in the bank (e.g., the easiest question on the kindergarten version) is printed as the first page of the book, and items are ordered so that the most difficult item is the last page of the item book. The experts use bookmarks (literally) to mark the point where they believe item difficult moves from a lower level of proficiency (e.g., emerging or minimal performance) to the next highest level of proficiency (e.g., basic or developing). The idea is that students who can pass items "above" the bookmark have a higher level of proficiency than those who are only able to pass items below the bookmark. Then the panel members discuss where they placed the bookmarks, and discussion continues until they reach consensus. Some states inform the panel what would happen if they adopted the bookmarks by applying proposed cut scores to test data and describing the proportion of students falling into each proficiency category. When the process concludes, the state uses the developmental scale scores corresponding to the bookmarks to define proficiency.

Educators should realize three things about this process. First, experienced, grade-level teachers (e.g., not statisticians, politicians, or other non-educators) set proficiency standards. Second, proficiency standards may vary across subject matter and across states as a consequence of this procedure. For example, mathematics teachers tend to set higher cut scores than social studies teachers, and teachers in some states may set higher standards than those in other states. Finally, standards are not linked to norms; they are linked to subject-matter criteria.

STAKES OR ASSESSMENT CONSEQUENCES

Sanctions and Rewards

Although the phrase "High Stakes Test" is popular (and even appears in the title of this chapter!), it is important to appreciate the test itself has relatively few consequences for individuals. For example, TerraNova or Iowa Test of Basic Skills scores have no particular consequences until educators and educational systems attach consequences to those scores. Consequences fall along a continuum, from low stakes (having relatively few/minor consequences) to high stakes (having many/significant consequences) (see Heubert & Hauser, 1998).

1. Low stakes. Consequences are not directly tied to individuals involved in the assessment (students, teachers). Examples include collecting and reporting school or district results with no formal sanctions or rewards.

2. Medium stakes. Consequences are indirectly tied to assessment stakeholders, but the effects are delayed or nonspecific. Examples include the allocation of additional resources or loss of autonomy associated with test scores reported for schools or districts.

3. High stakes. Consequences are directly attached to individual stakeholders (students, teachers), and have major significance for their lives. Examples include promotion, retention, and graduation for students, and performance pay, personnel evaluation, and continued employment for teachers.

The higher the stakes, the higher the standards for the assessments used to make these decisions. A test may be valid for low or medium stakes uses, but not for high stakes decisions. The standards tests should meet for these uses are detailed in professional standards (see American Education Research Association

[AERA], 2000; AERA, American Psychological Association [APA], National Council on Measurement in Education, 1999; APA, 2001, for more information). These standards uniformly argue against making decisions on a single test score, and note that opportunity to learn is a necessary precondition for effective use of any test score to reflect student achievement. Some of the key consistencies among these standards, and other work (e.g., Heubert & Hauser, 1998), appear in Table 1.

Sanctions and rewards vary considerably across districts and states (Linn, 2001), but the majority use student performance data to make decisions about school success (*Education Week*, 2001). For example, in Vermont, school data are reported to the public, and there are few other direct consequences for any educational stakeholders. In contrast, Florida policy uses test data to make individual student decisions (promotion, retention, and graduation), provide sanctions (e.g., loss of autonomy) to low-performing schools, give rewards ($300/student, to be used as the school deems fit) to high-performing schools, and provide private school vouchers to parents of children enrolled in schools that are low performing two consecutive years. Chicago Public Schools has its own system, in which test scores are the exclusive criterion for judging school adequacy. Schools that consistently and dramatically fail to meet expectations are reconstituted (i.e., all school employees are released from positions at that site). The local school council for the site will then hire a new staff, some of which may have worked at the site prior to reconstitution; staff not rehired may look for other positions within the district. Other districts and states are experimenting with performance pay (linking teacher salaries and bonuses to test scores), automatic admission or scholarships to state universities (for high student scores), and other incentives and consequences.

It is important to note that, although the specifics of accountability systems vary, they share some common principles:

1. Low scoring schools lose autonomy, not funds. Most accountability systems either maintain or increase funds for low scoring schools, but also provide technical assistance (which is often involuntary) or simply replace administrators.

Table 1. Guidelines for high stakes testing

- *Provide opportunity to learn.* Although agencies may hold students, teachers, and others accountable for student progress, it is unreasonable to hold students accountable for success unless they have been provided with the opportunity to learn the standards.
- *Never use a single score for decision making.* Making high stakes decisions on the basis of a single score is unwarranted in part because of the error in any test score, and in part because emphasis on a single score will inevitably distort the educational enterprise.
- *Provide multiple opportunities.* Students should be given more than one chance to demonstrate proficiency, and, therefore, should have multiple opportunities to take a high stakes exam. Likewise, examinees who fail an exam should be provided with the opportunity to learn exam content prior to retesting so that they can be successful.
- *Use multiple sources of information to make decisions.* Rather than rely on a single test score, high stakes decisions should include other forms of evidence, including information from the classroom, other tests, portfolios, or other evidence of student competence.
- *Assess unintended, as well as intended, consequences.* High stakes attached to test scores are intended to have beneficial effects on student learning, but accountability systems must identify and respond to unintended consequences, such as curricular narrowing, selection of inappropriate teaching strategies, or loss of opportunity to learn.
- *Align tests to standards and validate them for each use.* It is reasonable to hold students (and others) accountable for student learning only if high stakes tests are accurately aligned to standards. Likewise, tests developed and validated for one purpose (e.g., school or district accountability) must be validated for other uses (e.g., student graduation or promotion).
- *Provide clear rules for inclusion and accommodation.* Who takes the test, and under what conditions, is essential for fairness and accountability in high stakes testing. Students with disabilities, and those whose primary language is not English, may require accommodations or other supports to yield a valid and reliable assessment.

Sources for this table include AERA, 2000; AERA, APA, NCME, 1999; and APA, 2001.

2. High scoring schools gain praise, autonomy, and (sometimes) funds. Twenty states provide direct fiscal incentives for high test scores, but nearly all systems include publicity, praise, and increased freedoms (often in the form of decreased external scrutiny) to high scoring schools (*Education Week*, 2001).

3. Schools are always a unit of analysis. Although consequences may or may not accrue to individual students, teachers, classrooms, and districts, all states have some method to identify and intervene with low scoring schools. This is largely inspired by federal legislation, which requires states to have some mechanism to identify schools in need of improvement, and to take steps to improve such schools. It is important to note that federal law does not require any specific sanctions, nor does it require consequences for students, teachers, or other stakeholders.

4. There are more individual consequences for students than for adults. Although 23 state legislatures have passed legislation requiring the use of test scores for promotion, graduation, or both (National Governors Association, 1998), only six states offer incentives (e.g., scholarships) to students, and only three states have passed any specific consequences for teachers, administrators, parents, or other adult stakeholders based on student test scores (*Education Week*, 2001).

Intended Outcomes

Educational systems attach stakes to assessment results to achieve various goals. A fundamental premise behind the educational accountability movement is that the education could be better. That is, careful monitoring (and, in higher stakes systems, sanctions and rewards) will induce educators, students, and parents to be more effective in promoting student learning. Thus, assignment of rewards and sanctions based on test results is merely a means to increase the intended outcomes of accountability. The intended outcomes of educational accountability programs include:

1. Curricular alignment. In some settings, state standards, classroom instruction, and tests are not aligned. That is, what the state intends for students to know and do, what teachers teach, and what tests test are three different things. Assuming that states have aligned their assessment systems with their standards (an issue discussed later in this chapter), assessment results indicating low levels of performance should prompt self-examination and consideration of how best to align instruction and curricular materials to state standards.

2. General efficiency increases. Poor outcomes should invite consideration of resource allocation, particularly with respect to non-classroom expenditures (e.g., administration, transportation).

3. Increased motivation. Consequences for students and teachers are intended to increase the effort toward educational achievement. Although many may take offense at the presumption that they are not already trying their best, many individuals outside education (and even some within education) suspect that some individuals are not motivated to teach or to learn.

4. Educational equity. Disaggregating test results by student groups (e.g., ethnicity, gender, socioeconomic or disability status) should inspire educators to carefully examine the degree of educational equity they provide to historically underserved (and low-performing) groups. Simply reporting the mean of all scores may lead to inaccurate conclusions about the relative success or failure of schooling for a particular group.

The logic and popularity favoring accountability as a mechanism for school reform exceeds the evidence. That is, although test scores tend to improve when accountability programs are put into place, the gains are not large, tend to level off after a few years, and do not generalize to other tests (Linn, 2000). Also, the validity argument to support the use of large-scale tests as a mechanism for improving education is missing two key forms of evidence (Haertel, 1999): (a) that test scores reflect skills that generalize to other contexts (e.g., to what degree do tests reflect skills needed for post-school success?), and (b) that school test scores reflect quality of schooling (rather than other factors, such as student demographics).

The latter issue will be addressed later in the section on methods of accountability. Despite the incomplete evidential base, legislative and political support is strong for mandated accountability, and will remain so for the foreseeable future.

Unintended Outcomes

Although the intended outcomes of educational accountability systems are laudable and popular among educators and others, the unintended consequences of accountability systems may undermine the achievement of intended outcomes (see Coffman, 1993, for a discussion). Unintended outcomes of educational accountability programs include:

1. *Curricular narrowing.* Known in its most extreme form as "teaching to the test," curricular narrowing describes educators' restricting the range and depth of academic content coverage to those topics and responses they think will be on the test. Curricular narrowing can range from broad efforts (e.g., reducing or eliminating music, arts, or athletics) to narrow efforts (e.g., giving practice tests, emphasizing multiple choice items on classroom assessments). Curricular narrowing is also found in teachers' tendency to shift from constructivist, thematic, and "deep" forms of student learning and pedagogy (see Braden, Schroeder, & Buckley, 2001) to superficial coverage of a wide range of topics (sometimes termed the "spray and pray" method of instruction).

2. *Scholastic demoralization.* This phenomenon occurs when students (and to a lesser degree, teachers and parents) are repeatedly confronted with evidence of poor progress and competency. Consequently, many students move from overt frustration to resignation, as evidenced by reduced classroom involvement, infrequent completion of homework, and poor attendance, truancy, and drop out. Although this phenomenon may be precipitated by poor performance on any form of achievement assessment (e.g., teacher tests, quizzes, homework), and its most commonly cited source is low grades (not tests per se), regular, formal assessment may contribute to scholastic demoralization among low scoring students (WestEd, 2000).

3. *Corruption.* Efforts that individuals take to increase test scores that invalidate those scores are efforts to corrupt the accountability system. Examples include student cheating (bringing in answers or other resources not allowed in the test), teacher cheating (giving advance copies of the test, test answers, or other supports not allowed before, during, or after the test setting), and administrator corruption (changing test answers, encouraging test practices that are forbidden). Although most corruption efforts aim to inflate test scores, some accountability systems may be corrupted by deflated or inappropriately low test scores. For example, states are required to show that schools meet standards; establishing low standards would result in high rates of success, but would corrupt the accountability system.

4. *Inequitable educational opportunity.* Students who are at-risk of low scores, or who have achieved low scores, may be assigned to different classrooms than higher performing peers. This form of tracking may lead to different, and generally less desirable, educational opportunities. Conversely, schools may allocate teachers, materials, and other resources disproportionately to low scoring or at-risk students, or grades in which testing occurs, thus denying appropriate educational opportunities to other students. Likewise, teachers may avoid seeking positions in schools with low scores, and in grades where testing occurs (Darling-Hammond, 2000). This leads to less experienced and less qualified teachers working in schools most in need of quality instructors, thus reducing OTL for children in those schools and grades.

5. *Panic.* Accountability programs have been remarkably successful at gaining teacher and student attention through the use of medium or high stakes consequences. Unfortunately, some programs may be too successful! Extreme levels of anxiety and arousal inhibit thoughtful, determined, and complex responses—and are likely to encourage some of the unintended consequences described above (e.g., curricular narrowing, corruption, tracking) (see Lerner & Tetlock, 1999, for a discussion of psychological factors in accountability).

These unintended consequences are not inevitable outcomes of educational accountability systems. Rather, they are most likely to occur when educators, students, and parents lack effective methods, appropriate supports, and personal control over learning and teaching. Unintended consequences can be mitigated or prevented by helping students, teachers, and parents meeting these needs (as discussed at the end of this chapter). Furthermore, there is little direct evidence to show that these consequences are prevalent or substantially undermine the intended consequences. If the case supporting accountability testing is incomplete, the case against it may be less complete.

Methods of Accountability

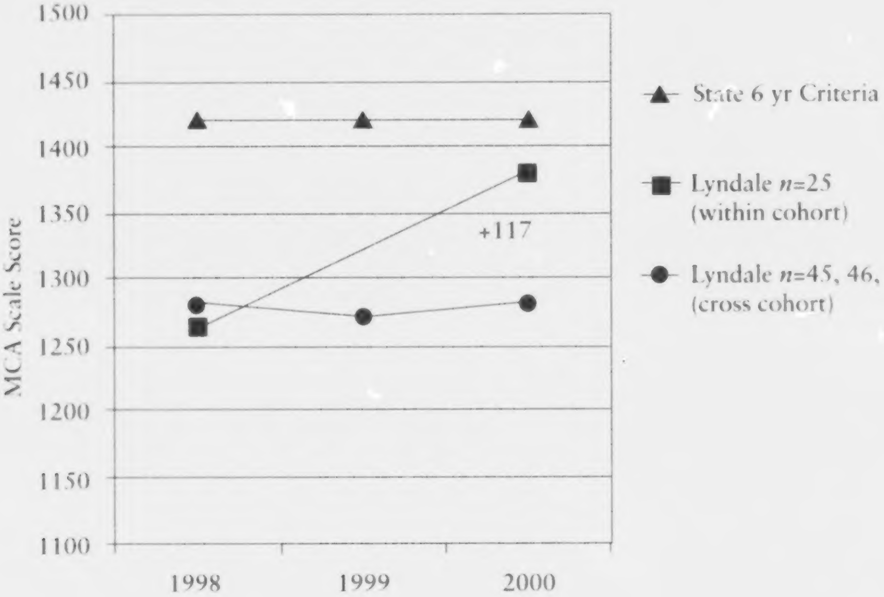
There are three methods for using assessment results to hold schools accountable (Linn, 2001). The first method, known as "current status," simply reports data from a given group in a given year, and compares that report to a standard. The second method compares data from the same group (e.g., students in fourth grade to the same students in fifth grade) to determine whether a school is making adequate yearly progress. This method is called the longitudinal approach by Linn (2001), and the value-added method by Meyer (1996), because it examines how much a student has progressed (or how much "value" a school has added) in a year. The third method is the quasi-longitudinal approach, in that it examines changes over time, but does not necessarily include the same cohort of students. For example, states may use two different groups (e.g., fourth graders last year to fourth graders this year) to determine whether a school is making adequate yearly progress, or all the students in a given grade over successive years (e.g., the fourth grade in 2001 to the fifth grade in 2002).

Each of these methods has its benefits and drawbacks. The current status method is inexpensive and easy to capture (it requires testing only at a fixed grade every year), and easy to calculate and understand (simple means). However, the current status method confounds student population with educational practices. That is, test scores generally have more to do with student populations than with instructional practices (Linn, 2001; Meyer, 1996). This is a fundamental challenge for accountability programs (Haertel, 1999). Longitudinal or value-added methods are more expensive (they require the same children to be tested at least annually) and more difficult to capture (student mobility is a challenge) and calculate (one must link data student-by-student across test episodes). However, value-added methods allow decision makers to assess the impact of educational experiences independent of student characteristics (e.g., each student serves as his or her own baseline), and allow decision makers to disaggregate data by ability range (e.g., are gains for the lowest, middle, and top 10% of students comparable?). Longitudinal methods provide some of the benefits (relative simplicity of reporting, ease of capture) and drawbacks (ignores mobility, only reports group averages rather than within-student change) of these systems. Quasi-longitudinal methods share some of the benefits, and drawbacks, of each of the other approaches.

Figure 1 provides an example of how current status, quasi-longitudinal, and longitudinal models might lead to different conclusions about school effectiveness. This example is drawn from Minneapolis Public School's accountability program (Spicuzza & Heistad, 2001). The school in this example (Lyndale) is an urban school with a high minority, low socio-economic student body. The ordinate shows the mean Minnesota Comprehensive Assessment (MCA) scale score. Three different values are entered. The top value (triangles) shows the expected proficiency standard for all schools in Minnesota (i.e., all students are to be at or above this score to be judged proficient). The next set of values (boxes) reflects longitudinal outcomes for the same cohort assessed in 1998, and again in 2000. These values show an increase of 117 scale score points, which is greater than the state average for students across a 2-year interval. The bottom set of values (circles) shows the quasi-longitudinal outcomes (i.e., the mean scale scores for students in the same grade in 1998, 1999, and 2000).

The current status method of accountability would note that, in each of the three years reflected on the graph, Lyndale fell below the state standard. The quasi-longitudinal method (comparing data from the last 3 years) suggest Lyndale is stagnant; that is, its students get the same scores in three consecutive year, and so it would lead to the conclusion that Lyndale is making little or no progress toward the state proficiency goal. In contrast, the longitudinal data show a gain of 117 scale score points in 2 years, showing that students who stayed in Lyndale made faster-than-average progress toward state proficiency standards.

Figure 1. Minnesota Comprehensive Assessment Data for Lyndale School



Thus, different methods of accountability may lead to different conclusions about school effectiveness. It should be noted that Minneapolis incorporates a mix of data analysis methods (including current status, longitudinal, and quasi-longitudinal methods), and a variety of indicators (including state test scores, attendance, Curriculum-Based Measurement, regular district tests, and other measures) to identify schools that are (and are not) effective.

Different accountability methods also yield dramatically different descriptions of special education outcomes (Bielinski & Ysseldyke, 2000). Current status and quasi-longitudinal designs show the gap between students with disabilities versus students without disabilities gets larger in higher grades. The increasing gap suggests students in special education fall further behind their general education peers. However, the longitudinal or value-added accountability method (which compares the same children to each other over time) shows the gap is constant, suggesting special education is as effective as general education in promoting academic progress. The apparent discrepancy between these accountability methods is due to asymmetrical migration of students. High scoring special education students exit special education, and low scoring general education students enter special education. This asymmetrical migration over grades leads to the erroneous impression that special education is holding students back, when in fact special education is adding the same value as general education.

Currently, most districts and states use current status methods in their accountability programs, due in large part to the increased expenses (i.e., annual testing in multiple grades, data analysis) of longitudinal and quasi-longitudinal methods. Although Linn (2001) views the emphasis on current status as unfortunate, others oppose longitudinal models on educational equity grounds (e.g., *Education Week*, 2001). That is, by adjusting school expectations for initial or prior student achievement, one could argue the accountability system allows lower expectations for low scoring students than for high scoring students. To return to the Lyndale School example, one could argue that praising the school for improving the cohort's academic achievement by 117 scale score points is tantamount to praising the school for producing a mean score that is below proficiency. Consequently, educational agencies (e.g., Minneapolis) strive to develop methods of accountability that reward progress, while at the same time ensuring that accountability methods demand high (and equitable) outcomes for all students (Linn, 2001).

STUDENTS WITH DISABILITIES AND EDUCATIONAL ACCOUNTABILITY

Of particular interest to many school psychologists is the issue of including students with disabilities in educational accountability programs. The 1997 amendments to the Individuals with Disabilities Act (IDEA 1997) mandate that states must include students with disabilities in their educational accountability systems, and include students with disabilities in the same system as students without disabilities whenever possible. Although the legislation does not specify an exact number, regulators assume that states should have 98% of all students participating in the standard accountability system. Given that most states classify 12% of the students in a given grade as disabled, it means that approximately 85% of students with disabilities must be included in state systems to meet the overall 98% participation goal.

Many educators serving students with disabilities may oppose students' inclusion in large-scale testing and accountability programs. After all, students with disabilities already endure more testing than other students (e.g., quarterly Individual Education Plan (IEP) goals, annual reviews, triennial evaluations), and are more likely to do poorly on accountability assessments, thus leading to academic demoralization. However, equity advocates argue that exclusion of students with disabilities from accountability programs would allow schools to ignore their needs, shunt them into low quality environments that would deny students access to the general curriculum, and reinforce low expectations. In short, equity advocates favor inclusion: If students are not counted, they don't count (Elliott, Braden, & White, 2001).

Assessment Accommodations

The primary mechanism for including students with disabilities in educational accountability programs is via testing accommodations. However, it should be noted that many students with mild disabilities need no accommodations, or need only physical accommodations (e.g., wheelchair accessible furniture). Still, many students will require accommodations because they have difficulties with literacy, regulating their behavior, or gaining access to written or spoken aspects of the assessment. There are four major domains of assessment accommodations (Thurlow, Elliott, & Ysseldyke, 1998):

1. Setting (e.g., accessibility furniture, isolated seating to avoid distractions, familiar environment to reduce anxiety)

2. Timing (e.g., extended time, rest breaks to avoid fatigue, dividing a long assessment into shorter periods)

3. Administration (e.g., signing or saying assessment directions, large print, cuing to direct attention)

4. Response (e.g., allowing oral, signed, pointing, or dictated responses, providing a keyboard or response console)

Generally, changes to test content (e.g., deleting a test, substituting a different test) are not acceptable for educational accountability purposes. Because accountability presumes all students take the same tasks, changes in the test itself are generally not allowed. One exception to this principle may be providing a version of a test aimed at a lower grade level (known as "off-level" testing) for students who have skills too low to be accurately assessed by the grade-level version used for accountability. However, most states do not allow off-level testing accommodations. School psychologists in particular should note that, although adjustments to test content are allowed (and even encouraged) in IEP and clinical assessments (see AERA, APA, NCME, 1999, chapter 9), they are not typically allowed in accountability assessments.

All states must allow accommodations for students with disabilities (see Office of Civil Rights, 2000, chapter 2), but often professionals are not clear about when, how, or what accommodations are appropriate. Most states provide guidelines, and some even provide approved lists of accommodations. Table 2 lists accommodations allowed by states (note that Table 2 combines setting accommodations under the single category of administration accommodations). However, educators should be thoroughly familiar with the specific requirements within their state, as not all states allow all accommodations.

Research and practice guidelines (e.g., Braden, 1999; Elliott, Braden, & White, 2001; Elliott, Kratochwill, & McKevitt, 2001; Thurlow, Elliott, & Ysseldyke, 1998) suggest the following principles to determine whether and what accommodations are appropriate:

1. The accommodation should be in place and used in the student's education setting for at least 4–6 weeks prior to the assessment. Accommodations that are unfamiliar to the student may not help, and even hinder, test performance.
2. Accommodations should address the student's access to the test (e.g., ability to read, hear, or see content, respond using an accessible medium, sustain attention to the test) rather than the skills targeted by the test. That is, it would generally be acceptable to read a mathematics test to a student with a reading disability to provide access to the mathematics, but would be inappropriate to read the same student a reading test (see Phillips, 1993, 1994, 1996, for more information about the distinction between "access" and "target" skills).

Table 2. Accommodations for students with disabilities

Presentation format

- Braille edition
- Large-print editions
- Templates to reduce visual field
- Short-segment testing booklets
- Key words highlighted in directions
- Reordering of items
- Use of spell checker
- Use of word lists/dictionaries
- Translated into sign language

Administration format

- Oral reading of questions
- Use of magnifying glass
- Explanation of directions
- Audiotape directions or test items
- Repeating of directions
- Interpretation of directions
- Videotape in American Sign Language
- Interpreter signs test in front of classroom/student
- Signing of directions
- Amplification equipment
- Enhanced lighting
- Special acoustics
- Alone in study carrel
- Individual administration
- In small groups
- At home with appropriate supervision
- In special education classes separate room
- Off campus
- Interpreter with teacher facing student; student in front of classroom
- Adaptive furniture
- Use place marker
- Hearing aids
- Student wears noise buffers
- Administrator faces student
- Specialized table
- Auditory trainers
- Read questions aloud to self
- Colored transparency
- Assist student in tracking by placing students finger on item
- Typewriter device to screen out sounds
- Extended testing time
- More breaks
- Extending sessions over multiple days
- Altered time of day that test is administered

Response format

- Mark responses in booklet
- Use template for recording
- Point to response
- Lined paper
- Use sign language
- Use typewriter/computer/ word processor
- Use Braille writer
- Oral response, use of scribe
- Alternative response methods, use of scribe
- Answers recorded on audiotape
- Administrator checks to ensure that student is placing responses in correct area
- Lined paper for large script printing
- Communication board

Other

- Out-of level testing

Reprinted from Office of Civil Rights (2000, Appendix C, Table 2). Council of Chief State School Officers, Annual Survey: State Student Assessment Programs, Washington D.C., 1999.

3. Accommodations should seek to reduce construct-irrelevant variance while retaining adequate construct representation (see Messick, 1995). This means that accommodations should seek to remove the influence of a disability that is irrelevant to the construct being assessed. For example, visual impairment may provide a construct-irrelevant influence on an individual's reading score when the test is administered using standard print. Providing the same test in large print, or allowing the individual to use technology that magnifies the print, would remove the construct-irrelevant variance from the assessment while maintaining construct representation (i.e., it still tests reading). This is similar to Phillips' use of "access" and "target" skills, but Phillips justifies her principles within a legal (rather than a psychological) framework.

4. Students who have access to, and are expected to acquire, the general education curriculum should participate in the general education accountability program. Conversely, students who do not come in contact with, nor are expected to acquire, general education curriculum (i.e., students with severe disabilities) should probably not participate in the general education accountability program.

5. Use prior testing as a guide to developing and implementing accommodations. Prior testing could include participation in large-scale assessment in earlier grades, and participation in classroom-based testing.

6. Document accommodations and the student's response to them. Documentation is generally required by states for eligibility (i.e., to be eligible for accommodations, the student must have an IEP or Section 504/ADA Individual Assessment Plan specifying the accommodations needed). However, documentation is also increasingly important for students who will participate in high school and post high school testing, such as college entrance, GED, and employment exams.

7. When in doubt, include the student in the assessment. There is no evidence that students with disabilities are harmed by participation. Although many educators may resist inclusion because they feel it will harm the student's self-esteem (e.g., the student may be frustrated or score poorly), they should also appreciate that exclusion from assessment may be detrimental to the student's self-esteem (e.g., the student may feel left out or humiliated to be separated from peers, or get the message that the student is "too stupid" to take the test). The limited research suggests that students with disabilities view tests and respond to them in the same way as their unimpaired peers (Elliott, Kratochwill, & McKevitt, 2001).

Alternate Assessment

IDEA 97 directs states to include students with disabilities in educational accountability programs even when they cannot be included in the general accountability system. When students with disabilities cannot be included in an exam, educators must develop an alternate assessment to evaluate the student's progress. Some states (e.g., Indiana) have aligned alternate assessment standards with content standards, so that a student's progress can be monitored from pre-academic through secondary school levels. Other states (e.g., Wisconsin) have not articulated continuous standards, and simply suggest alternate performance indicators for students not participating in the regular exams.

A thorough review of alternate assessment is beyond the scope of this chapter. Suffice it to say that educators must do whatever they can to include students with disabilities in the general accountability system, and when inclusion is not possible, develop an alternate assessment to monitor student progress. Given that states seek to include at least 98% of all students in the accountability system, educators should aim to include 85% (or more) of students with disabilities in the general education program. Alternate assessment is for those students whose educational goals are generally not aligned with the general curriculum or expectations, or about 15% of students with (the most severe) disabilities.

BEST PRACTICES FOR SCHOOL PSYCHOLOGISTS AND EDUCATIONAL ACCOUNTABILITY

Because most educational accountability programs are outside the domain of the school psychologist (i.e., they are generally administered by the state via administration, general education, testing and research, or counseling personnel at most school sites), school psychologists may wonder what their role in educational accountability could or should be. School psychologists have much to offer the system via their expertise in assessment, measurement, and understanding of individual differences and exceptionality. Consequently, participation in activities related to educational accountability may provide an avenue for school psychologists to gain visibility and influence in general education. The activities listed below are not exhaustive, but are intended to suggest roles for school psychologists related to educational accountability.

Local Policies Related to Educational Accountability Testing

In some states, there may be little or no flexibility regarding the use of test scores for high stakes (e.g., student promotion, retention, and graduation). However, some states direct school districts to develop policies, and most states provide some latitude in the interpretation and implementation of state policies. Because school psychologists understand the strengths—and the weaknesses—of assessment methodologies, they can help administrators and other educators develop, interpret, and implement ethical and appropriate policies for using test scores. Key considerations include basic principles of assessment (e.g., the use of multiple opportunities, methods, raters), and the implications of conjunctive versus disjunctive combinations of assessment data. There are a number of excellent references to guide policy development, interpretation, and implementation, including a report from the National Research Council on high stakes testing (Heubert & Hauser, 1998) and position statements from psychology (APA, 2001) and education (AERA, 2000) organizations (see Appendix A to locate these resources).

Table 3 provides an example of a promotion and graduation policy developed by a large district committee including three school psychologists. The proposed policy allows multiple forms of assessment to be used for making graduation decisions. The policy uses conjunctive criteria (e.g., the student must meet credit requirements in criteria 2 and 3 and 4 and 5) and disjunctive criteria (i.e., a student may graduate by meeting any one of criteria 2–5). Note that students may substitute expertise in one area for a deficit in

Table 3. Sample high school graduation criteria using high stakes tests

Students must earn required credit and ...

1. Must have a 2.0 or higher cumulative grade point average(GPA) in any two credits earned in classes aligned to the twelfth grade state Model Academic Standards in each of the core content areas (English, Mathematics, Science, Social Studies). A diploma will be granted to a student who meets the credit requirements and has at least a 2.0 cumulative GPA as above.
2. If a student has met the credit requirements for graduation but does not have a 2.0 GPA as above in each of the four core content areas, then the student must pass the High School Graduation Test (HSGT) in each of the content areas in which the GPA is less than 2.0. Students will be given four opportunities to pass the test, twice during both their junior and senior years on testing dates determined by the state department of education. A diploma will be granted to a student who meets the credit requirements and, for each of the four core content areas, has a 2.0 cumulative GPA as above or passes the HSGT.
3. If a student with a disability has a IEP that does not specify academic goals consistent with the state Model Academic Standards for the twelfth grade due to the student's functional level, but the student has met the credit requirements, the student will be granted a diploma.
4. If a student has met the credit requirements but does not meet the academic performance criteria as in number 1 above and does not pass the HSGT, the student may complete a district-defined portfolio evaluation of academic work that provides evidence the student has met state Model Academic Standards for twelfth grade. Portfolio evidence in the student's native language may be submitted. A student may use a portfolio to provide evidence of meeting twelfth grade state Model Academic Standards in *one* non-assessed area (e.g. Fine Arts, Foreign Language) in lieu of *one* of the assessed areas of the HSGT. The outcome of the portfolio review process may result in the granting of a diploma.
5. If a decision is made to deny graduation to a student who has the requisite number of credits over the objections of the student or parent/guardian, then that student may appeal the school's decision to the assistant superintendent responsible for that level, whose decision shall be final.

another area; students with IEPs may earn a diploma if they earn credit and are not working toward standard academic goals; and that non-English assessments are allowed to demonstrate proficiency.

Another example of influencing policy would be to develop multiple methods for assessing student work. School psychologists can draw on their assessment expertise to develop Curriculum-Based Measurement, portfolio, performance assessment, and other measures of student learning (see other chapters in this book). Then school psychologists may incorporate these measures into district promotion and graduation policies in addition to (or in lieu of) the state and district testing.

Promote Assessment Literacy

Despite the critical importance of assessment knowledge in the current climate of educational accountability, most educators are unable to understand and use assessment. Stiggins (1995) describes the body of knowledge needed to understand and use assessment as "assessment literacy," and notes most teachers lack assessment literacy. Again, school psychologists generally have strong expertise in assessment, and so could serve to promote assessment literacy among their general education colleagues. Examples include workshops on interpreting large-scale assessment results, introducing educators to test principles and content, pros and cons of assessments, and fundamentals of assessment (e.g., reliability, validity). School psychologists should also consider assessment literacy programs for students, their parents, and the general community. A truly strategic school psychologist would target an assessment literacy workshop to members of the local media shortly before the annual release of state or district data to help them understand and accurately report test data to the public.

Accommodations and Alternate Assessment

School psychologists can draw upon their knowledge of assessment, accommodations, and exceptionality in helping develop effective accommodations so that students with disabilities can participate in accountability assessments. Explaining the principles that lie behind assessment accommodation decisions can be very helpful to educators who know children well, but do not always share the skills and perspective needed to develop appropriate accommodation strategies. Other chapters in this volume may assist school psychologists in this activity. However, school psychologists should be particularly sensitive to the ways in which data reported in current status and quasi-longitudinal models may distort special education outcomes relative to the longitudinal or value-added accountability method.

Promote Opportunity to Learn

The impetus for educational equity begins with ensuring equal opportunity to learn. There are many sources to guide educators, schools, and districts to enhance all students' opportunity to learn, and there are other chapters in this volume that provide guidance on how to promote successful learning environments for all students. Other resources appear in the appendix to this chapter (e.g., Education Commission of the States, 1998) and in the references for this chapter (e.g., Porter, 1995). A key concept is to ensure educators provide students with low academic skills opportunities to engage in intellectually challenging curricula, while at the same time adapting curricula to individual differences. Methods to accomplish this include instructional modifications (e.g., scaffolding), adapting classroom assessments, and providing educational supports that retain challenging curricular aspects. One example of how school psychologists can help teachers enhance opportunity to learn is to adapt classroom assessments in ways that retain intellectual quality. Table 4 presents a suggested set of steps for adapting classroom assessments that will assist educators in adapting and modifying classroom assessments in ways that retain opportunity to learn.

School psychologists are also obligated to discourage activities that reduce opportunity to learn. Providing evidence on the consequences of retention, tracking, test preparation programs (see next section), and other activities that reduce children's opportunity to learn. Many of these issues are reviewed in other chapters in this volume, and school psychologists can use their knowledge to steer schools away from "reforms" that reduce OTL.

Give Psychology Away

This motto inspired many school psychologists in the late 1960s and 1970s to use their knowledge to

Table 4. Assessment accommodations framework: Principles for application

- *Students should not receive accommodations unless they are needed.*
  Many students with disabilities or low achievement can participate in challenging assessment tasks without any modifications. Just because a student has a disability does not mean the student needs assessment accommodations. If educators are unsure whether to accommodate a particular task or assessment, then they should encourage the student to try the task without accommodations. Offering the option for accommodations later (e.g., retaking or doing the task over) without penalty will encourage risk taking, which is an essential element of education reform.
- *Accommodations decisions presume target and access skills are clearly identified.*
  Teachers must clarify the intended targets of the assessment (the knowledge and skills the assessment intends to measure), and the skills that are required for access (the skills the student must have to understand or respond to the assignment). For example, reading skills are often targeted in language arts assignments, but are often access skills for mathematics, social studies, or science assessments.
- *Accommodations should address access, not target, skills.*
  An accommodation is appropriate if it allows students with disabilities access to the assessment task, but not if it changes the skill targeted by the assessment. This means an accommodation may be appropriate in one instance, but not another. For example, extra time might be an appropriate accommodation if the assessment targets reading comprehension skills, but it would be inappropriate if the assessment targets reading fluency skills.
- *Modify target skill complexity when access is insufficient to allow for reasonable assessment of skills.*
  Some students (usually those with severe disabilities) have skill levels that are so far below the level targeted in an assessment that inclusion in the assessment, even with successful access, is of no educational value. For example, a student with a severe cognitive delay may lack the language and concepts needed to understand a science task, even if the task is accommodated (e.g., reading the assessment, providing extra time, writing help) to allow the student access to the assessment task. In these cases, teachers should consider modifying the assessment to assess a less complex level of targeted skills.
- *Modifications to assessments should retain intellectual quality, even if they are modified to a simpler skill level.*
  When teachers modify tasks to assess a lower level of targeted skill, they should retain the assessment's intellectual quality (i.e., construction of knowledge, disciplinary inquiry via elaborated communication, and value beyond school). For example, a teacher should modify a science/mathematics assessment on rocketry by inviting the student to produce a simpler experiment (e.g., assessing Newton's third law of motion instead of studying the multiple effects of aerodynamics, gravity, acceleration, and propulsion). The teacher should not substitute an assessment with limited intellectual quality (e.g., labeling the parts of a rocket on a diagram, filling in the blanks, calculating answers to specific questions, matching definitions to terms).

Source: These recommendations are adapted from Braden, Schroeder, & Buckley (2001).

improve schooling and development for all children. The motto is equally relevant today, in that educators are being increasingly pressured to make decisions about curricula, instruction, and policies affecting children. High stakes testing has created a sense of urgency—but may have also inspired panic. Solid information about individual differences in intelligence, learning rates, disability, and instruction is essential to help educators select high quality responses to the high stakes pressure to reform. School psychologists can provide information that will help educators avoid selecting low quality, faddish, and superficial responses, and instead draw on research and science to guide educational changes.

Two examples in particular deserve mention. First, many educators are responding to testing pressures by adopting instructional strategies that emphasize superficial coverage of content to prepare for state exams (i.e., "spray and pray" or "drill and kill" approaches). This is extremely unfortunate, because it undermines the type of effective and meaningful school reform accountability programs are meant to encourage (see Newmann & Wehlage, 1995), and because it does not work. Although it is clear that schools and districts generally post gains for 2–4 years after adopting a new test, these gains typically level off and do not generalize to other tests—suggesting superficial changes have limited impact on achievement (Linn, 2000). Controlled research supports this conclusion by showing superficial coverage strategies produce standardized test results that are no better than high quality instructional strategies—and these superficial strategies produce much lower results on richer performance assessments (Baxter, Shavelson, Herman, Brown, & Valdez, 1993). Likewise, studies in the Chicago Public Schools (e.g., Newmann, Bryk, & Nagaoka, 2001; Smith, Lee, & Newmann, 2001) show that students who receive high quality intellectual instruction do better on standardized tests than students who receive low quality, coverage-oriented instruction. Some key sources that may be helpful in presenting this message are the report of the Center on Organization and Restructuring of Schools (Newmann & Wehlage, 1995), and the Research Institute on Secondary Education Reform—Youth with Disabilities publications and website.

A second example of giving psychology away is sharing knowledge about test preparation programs and strategies. Although the majority of research addresses preparation for college entrance exams such as the SAT or ACT, there is some work addressing K–12 achievement tests. The results of both lines of research converge in suggesting test preparation programs produce small or no improvements in test scores (Chicago Public Schools, 1987; Cushing, Sabers, & Kerrins, 1989; DerSimonian & Laird, 1983; Ehrmann, 2000; Powers, 1993; Scholes & Lain, 1997). In those studies showing small positive effects, mathematics scores tend to be increased more than do language arts scores (Deaton, Halpin, & Alford, 1987; Federal Trade Commission, 1979; Powers, 1993; Reynolds & Oberman, 1987). However, a careful examination of the psychological literature would suggest that reforming education to engage students in intellectually challenging content would be more effective than spending time and money on test preparation programs. Genuine reforms not only improve test scores—they improve learning and teaching.

SUMMARY

Accountability for student achievement currently enjoys strong popularity, and is supported by state and federal education laws. Both U.S. political parties oppose social promotion (i.e., the advancement of students to higher grades based on age rather than demonstrated academic accomplishments), and there is broad political consensus that high school graduates should clearly demonstrate mastery of academic standards. Consequently, accountability testing for low, medium, and high stakes is likely to continue or increase. The question confronting most educators is not whether to use high stakes testing to make decisions, but rather how to use and respond to high stakes testing in ethical and appropriate ways. School psychologists can use their knowledge of assessment, learning, individual differences, and broad psychological principles to help educators, administrators, and parents understand and respond to educational accountability mandates, and the consequences that accrue to high stakes tests.

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AUTHOR NOTES

This work was supported in part by a grant from the U.S. Department of Education, Office of Special Education and Rehabilitative Services, Office of Special Education Programs (#H158J970001) and by the Wisconsin Center for Education Research, School of Education, University of Wisconsin—Madison. Any opinions, findings, or conclusions are those of the author and do not necessarily reflect the views of the supporting agencies.

I am indebted to Latrice Green and Richard Spicuzza for their comments in organizing this manuscript.

APPENDIX A — RESOURCES

Description	Location
Achievement test primer (overview, comparison, glossary)	http://www.edexcellence.net/library/cizek.pdf
AERA position on high stakes assessment	http://www.aera.net/about/policy/stakes.htm
APA position on high stakes assessment	http://www.apa.org/pubinfo/testing.html
Assessment and accountability (Linn, 2000)	http://www.aera.net/pubs/er/arts/29-02/linn01.htm
Assessment literacy and accommodations text (Elliott, Braden, & White, 2001) and on-line course (Braden & Elliott, 2000-2001)	http://www.cec.sped.org/bk/catalog/assess.html#0 http://www.cec.sped.org/pd/webcourse.html
Bookmarking procedure (example)	http://www.dpi.state.wi.us/dpi/oea/profscor.html
Critical Issues in Large-Scale Assessment: A Resource Guide (CCSSO)	http://publications.ccsso.org/ccsso/publication_detail.cfm?PID=336
Designing and implementing standards-based accountability systems.	Education Commission of the States (1998). Available from ERIC ED419275.
Glossaries of educational testing terms	http://www.ed.gov/offices/OCR/testing/appendixb.html and http://www.cse.ucla.edu/CRESST/pages/glossary.htm
Guidance On Standards, Assessments, and Accountability	U.S. Dept. of Education, http://www.ed.gov/offices/OESE/StandardsAssessment/
High school exit exams (current listing, description of state programs)	National Governors Association http://www.nga.org/center/divisions/1,1188,C_ISSUE_BRIEF^D_1478,00.htm
Iowa Test of Basic Skills publisher's information	http://www.riverpub.com/products/group/itbs_indepth.htm
Legal issues in high stakes testing	Office of Civil Rights, U.S. Dept. of Education: http://www.ed.gov/offices/OCR/testing/
National Center on Educational Outcomes (information about students with disabilities and standards-based assessment/reform)	http://www.coled.umn.edu/nceo/
National Research Council report on High Stakes: Testing for Tracking, Promotion, and Graduation (Heubert & Hauser, 1998)	Entire book and executive summary available http://books.nap.edu/catalog/6336.html
President's position on education (*No Child Left Behind*)	http://www.whitehouse.gov/news/reports/no-child-left-behind.html
Standards-Based Accountability (CRESST brochures)	http://www.cse.ucla.edu/CRESST/Files/policybriefnl.pdf and http://www.cse.ucla.edu/CRESST/Files/PolicyPaper.pdf
Stanford Achievement Test—Ninth Edition example items from Florida	http://www.firn.edu/doe/sas/fcat/fcatsmpl.htm
Stanford Achievement Test—Ninth Edition publisher's information	http://www.hemweb.com/trophy/achvtest/sat9view.htm
State assessment programs annual description and review (Quality Counts)	Education Week http://www.edweek.org/sreports/qc01/
State content standards (all states and comparative reviews)	http://www.achieve.org
State education departments (listed by CCSSO)	http://www.ccsso.org/seamenu.html
Summary of IDEA legislation	http://www.ed.gov/offices/OSERS/IDEA/index.html
TerraNova example items example items from a state test	http://www.dpi.state.wi.us/dpi/oea/content.html
TerraNova publisher's information	http://www.ctb.com/products_services/terranova/intro.shtml

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Best Practices in School-Community Partnerships

Susan M. Sheridan
University of Nebraska-Lincoln
Scott A. Napolitano
Lincoln Pediatric Group
Susan M. Swearer
University of Nebraska-Lincoln

OVERVIEW

> I am interested in attempts to develop the notion of a community system of services, mutually interdependent, seeking to locate, evaluate, and serve the interests of families and children in trouble. The concepts of accountability and responsibility provide the motive power for some sacrifice of traditional prerogatives in the face of community objectives.
>
> —*Eleanor Roosevelt*

The message conveyed in this quote by Eleanor Roosevelt still rings true with many educators, officials, and policy reformers today. Interestingly, notions related to community, coordination, and collaboration have been touted for several decades. Such constructs hold promise for addressing the growing challenges facing societal structures in contemporary America. Symptoms of social dysfunction are apparent in several contexts, including those at the school, family, and community levels. Accordingly, greater degrees of responsibility are being placed on the school for addressing the diverse needs of students. However, it is unrealistic to expect schools alone to deal with the growing array of problems placing children at risk. It is clear that schools alone cannot provide all the services that children need to learn and achieve. Similarly, it is not possible for community-based entities to meet the challenges in isolation. The formation of school-community partnerships that are proactive, responsive, and actualized in specific contexts appears to be a viable avenue to begin addressing large scale problems in a comprehensive, systemic way.

The word "community" is derived from the Latin word "communis," meaning "common." For a common group or entity to be considered a "community," shared cultures, identities, responsibilities and values are essential. Beyond a geographic familiarity, community connotes "a place of reference and belonging" (Chaskin & Richman, 1993, p. 207).

Definition of School-Community Partnerships

School-community partnerships involve "an interactive exchange of ideas, resources, services, and expertise between educational and non-educational agencies in a variety of settings that mutually address the needs of students and the community as a whole" (Welch & Sheridan, 1995, p. 353). Generally speaking, such collaborations utilize community resources together with school resources to strengthen schools, families, communities, and student learning and development. According to Nelson, Amio, Prilleltensky, and Nickels (2000), "through positive relationships, groups of diverse stakeholders create something larger than a specific… program: they build a sense of community, a positive social climate, and an ethos of change" (p. 124).

The notion of schools and communities as "partners" implies several distinct qualities about the relationship. *Defining characteristics* of school-community partnerships are listed in Table 1 and explored briefly below.

INTERACTIONS AMONG PARTNERS ARE COLLABORATIVE

Importantly, when schools and communities come together to truly partner around the needs of their shared constituencies, collaborative patterns of interaction are paramount. *Collaboration* is characterized by a diversity of individuals and vantage points working together as co-equal parties, sharing in the identification of goals and solution of problems, and forging trusting relationships wherein resources, power, and responsibilities are shared. According to Minke (2000), "collaboration encompasses far more than simply working together; it involves fundamental restructuring of *how* individuals or agencies work together" (p. 379; emphasis in original). It implies more than individuals or groups coming together to cooperate or coordinate services; rather, it implies that boundaries among agencies are blurred, and that resources and responsibilities are jointly shared in the development, implementation, and evaluation of program objectives.

RELATIONSHIPS ARE COOPERATIVE, INTERDEPENDENT, AND BALANCED

Schools and agencies/community groups share equally in identifying, addressing, and solving problems. Likewise, program goals are mutually determined. With shared ownership comes a shared responsibility for the child's success, with the recognition that outcomes achieved in the context of the partnership are uniquely superior to those achieved by any party in isolation. The status of educators and community members is complementary, recognizing the benefits of unique contributions that each can make. Finally, each member of the partnership has generally equal opportunity in decision making.

MAINTENANCE OF A POSITIVE RELATIONSHIP IS A PRIORITY

The importance of relationship building in school-community partnerships cannot be overstated. McDaniel, Campbell, and Seaburn (1995; cited in Minke, 2000) aptly stated "the top three ingredients for effective collaboration … would be relationship, relationship, relationship" (p. 296). Failure to develop relationships can undermine the formation of successful partnerships.

In school-community partnerships, personal needs and goals are put aside to allow the needs and goals of the group to take precedence. Minke (2000) discusses the notion of "connected relationships," wherein partners "believe that the other person in trustworthy, is working toward a mutually held goal, and has positive regard for you" (p. 388). Additionally, all parties (school personnel, agency representatives, community members) believe that the partnership and the anticipated outcomes are worthy of the expenditure of the time and energy necessary for its maintenance.

RELATIONSHIP OCCURS IN AN ECOLOGICAL CONTEXT, WITH STUDENTS AT THE CENTER

School-community partnerships are based conceptually on the notion that students, families, schools, and communities are all members of interrelated ecologi-

Table 1. Characteristics of school-community partnerships

- Interactions among partners are collaborative.
- Maintenance of a positive relationship is a priority.
- Relationships are balanced.
- Relationships are cooperative and interdependent.
- The relationship occurs in a context with students at the center.
- Actions between schools and agencies/community groups are flexible, responsive, and proactive.
- Differences in viewpoints and perspectives are seen as strengths, not hindrances.
- There is a commitment to cultural diversity.
- There is an emphasis on outcomes and goal attainment.

cal systems (Bronfenbrenner, 1979; Christenson & Sheridan, 2001). Difficulties experienced by children and families do not represent inherent deficits. Rather, difficulties are the result of a mismatch among the individual or family and the environmental contexts (e.g., schools, neighborhoods, communities) within which they function. Services are therefore aimed at learning *from* the individual and family, and organizing programs in ways that are beneficial and viable within the interconnected family, school, and community systems. Although programs may be implemented at several levels (including the environmental or ecological levels), main attention is always given to the potential benefits and outcomes for students. That is, school-community partnerships are student-centered (Welch & Sheridan, 1995).

ACTIONS BETWEEN SCHOOLS AND AGENCIES/COMMUNITY GROUPS ARE FLEXIBLE, RESPONSIVE, AND PROACTIVE

The manner in which school-community relationships are defined and the actions that are developed vary depending on the unique school-community context and situation. Services and programs are useful only to the extent to which they are responsive to needs within a particular context. From one program to the next, community members and educators will be involved in very different ways depending on the nature of the contact, the needs presented, the goals for the program, the resources available, and a host of other relevant factors.

DIFFERENCES IN VIEWPOINTS AND PERSPECTIVES ARE SEEN AS STRENGTHS, NOT HINDRANCES

A main feature of school-community partnerships is the diversity of experiences, skills, perspectives, and views that are brought to bear on problems and programs. The respective vantage points of educators, agency representatives, and community members enhance the understanding of a situation and the opportunities and resources available for solutions. The unique knowledge, resources, talents, and expertise that educators and community members/agencies bring to a situation enhance the potential outcomes for students.

THERE IS A COMMITMENT TO CULTURAL DIVERSITY

When schools and communities join to form partnerships, services are delivered in a way that is respectful of the cultural values and traditions that community members and educators bring with them. Discrimination based upon language, race, ethnicity, class, gender, and sexual orientation is detrimental to a program's success. Services that are sensitive to important cultures and traditions in the community are most likely to be effective. Diversity is not only important for a program's implementation, it is also important in carrying out research and program evaluation activities.

THERE IS AN EMPHASIS ON OUTCOMES AND GOAL ATTAINMENT

School-community partnerships have clearly specified goals, and progress toward goals is closely monitored through data-based decision-making processes. Programs are not instituted simply because they are available; rather, they are considered carefully with attention to the degree to which they fit within the overarching priorities of the partnership. Goals and objectives that are identified are outcome-based, and include problem resolution or management, prevention, and development of skills and competencies.

Objectives and Benefits of School-Community Partnerships

In addition to these defining characteristics, there are several objectives of school-community partnerships. Objectives related to the partnership process, as well as the content of the programs can be elucidated. "Process" objectives include (a) combining and sharing resources, expertise, and efforts to achieve a commonly defined mission; (b) empowering educational and community personnel to access, refine, and/or develop new, creative approaches to tasks and problems; (c) developing and refining professional skills of all parties through the exchange of ideas, knowledge, and expertise; and (d) enhancing educational services for all students (Sheridan, 1995).

Objectives related to the content of a partnership program are also evident. Some school-community partnerships are formed to address academic or educational needs. *Educational objectives* focus on facilitating the academic and development growth of students and their families. An example of a partnership program that espouses an educational mission is literacy training for adults staffed by community volunteers, offered in a school's media center in the evening hours. *Social and health objectives* are evident in school-community partnership programs that are concerned with physical, health, and mental health needs of students and families. For example, anti-drug or violence programs, teen pregnancy groups, and nutritional classes represent programs that have at their center students' health and well being. *Vocational objectives* target job and career needs of students by providing career education and on-the-job training in or outside of the school building (Welch & Sheridan, 1995). Such programs often focus on teaching students skills or trades to use in the community following graduation.

It should be noted that some partnerships between schools, agencies, and community members form with clear objectives that encompass two or more objectives described above. There is often overlap in the objectives associated with programs. For example, some drug prevention programs may combine health/mental health objectives (e.g., remaining drug free, finding alternatives to drugs, coping with anxiety or depression) with those associated with academic support to assist a student to complete high school, and vocational training to teach functional job skills. Likewise, linkages formed among multiple community agencies (e.g., schools, mental health centers, health departments and clinics) in contemporary comprehensive service models illustrate coordinated efforts to address several shared objectives.

There are several benefits associated with school-community partnerships. According to the National P. T. A. (2000), "when schools and communities work together, both are synergistically strengthened and make gains that outpace what either could accomplish on its own" (p. 132). Although there are problems inherent in the empirical studies investigating school-community partnerships (e.g., poorly described models, varied procedures for establishing partnerships, lack of clearly defined constructs), it is generally agreed that positive outcomes for students, parents, teachers and administrators, and community agencies and organizations are achieved. *Students* benefit by gaining increased skills due to enriched curricular and extracurricular activities, enjoying improved positive relationships with adults other than parents and teachers, and acquiring an enhanced sense of value and belonging to the community. It is reported that when involved in partnerships, *parents* gain an awareness of the community's contributions to the school, develop a sense of connection with other families in the community, and gain knowledge of and use local resources to obtain needed services and improve their parenting skills. *Teachers and administrators* reportedly gain knowledge of and become involved in the social and community service referral process, develop skills for working with business partners, community volunteers, and mentors and gain knowledge of and use community resources to enrich their classroom instruction. Finally, *community organizations and agencies* gain improved access to community resources, form connections between business and prospective future employees (students), and gain a greater sense of purpose by contributing their knowledge and skills to students (National PTA, 2000).

BASIC CONSIDERATIONS

School psychologists can be instrumental in promoting partnerships between schools and communities. In a comprehensive chapter, Minke (2000) offered suggestions for school psychologists interested in establishing and participating in school-family-community partnerships. She indicates that school psychologists could (a) be an effective role model by examining their own thinking, using effective communication skills and using solution-oriented problem solving strategies; (b) create opportunities for relationship development; (c) attend to resource development by assessing the environment and developing a resource coordinating team; (d) set priorities and collaborate judiciously; and (e) be persistent. Below some additional considerations are provided for getting started and maintaining the process.

Getting Started in the Process

School psychologists interested in establishing school-community programs may question how they can make it work in their schools. Although every situation is unique, there are common elements necessary to get started. Across several sources and model programs, similar suggestions are made for establishing an environment that is prepared to implement a program. These include (a) cultivating a relationship with the principal; (b) reaching out to parents, teachers, and other partners; (c) focusing on children and results; and (d) establishing short-term goals.

CULTIVATING A RELATIONSHIP WITH THE PRINCIPAL

Principals play a pivotal role in schools, and can be instrumental in the success of partnership programs. Cultivating a positive relationship with the principal of a school is important for several reasons. Positive, trusting relationships with school leaders allow school psychologists to promote broadened, effective roles and to establish important support programs in schools. They can integrate and oversee the programs' services, and generate enthusiasm and commitment among teachers and other school personnel. Partnerships that are fully integrated into the school and accepted by the principal and teachers are the most successful. When garnering support of the principal, school psychologists can emphasize how a partnership among the school and local community agencies or groups can help support teachers' ability to teach; provide students with expanded learning opportunities; work to increase parent involvement; and provide additional support to the school.

REACHING OUT

School psychologists are in unique positions in schools that allow them access to individuals both within and outside of the formal walls of the school building. This places a unique responsibility on them to reach out to teachers, parents, and other potential partners working in the school or neighborhood. Although teachers' responses to school-community partnerships will vary, it may be possible to find some teachers who demonstrate a willingness to consider their role as going beyond the classroom and embrace new strategies to reach their students. Identifying a small number of teachers with whom to start, inviting them to serve on the school-community team, and informing them of the importance of their perspective and expertise on the team and in the program may be sufficient to establish an important teacher presence.

It is also important to identify parents who can generate ideas and assistance in the establishment of school-community linkages. Some parents may already demonstrate an awareness of the importance of their role in the educational success of students. They may have potential as leaders for initiating broader levels of parent and community support. Likewise, school psychologists or others within the school can institute a parent-outreach initiative aimed at reaching out to and soliciting input from parents about goals and aspirations for their children. Parents are more likely to be involved if they believe they can make a difference in what happens for their children.

Within local communities there are several partners whose resources are already being used to support children and families. Likewise, there are often personnel within schools whose roles overlap with each other, or with individuals in the community. Frequently, staff in a school and in community agencies performs similar functions for the same youth without considering how their work is related or effective in connecting children and families to the resources they need. When reaching out to communities, the roles of school nurses, social workers, counselors, psychologists, and other support staff should be considered. Efforts can then be directed toward determining how overlapping resources can be allocated, shared, or diversified to meet needs rather than perform functions.

FOCUSING ON CHILDREN AND RESULTS

When getting started, the overall purpose and goal of school-community partnerships must remain central. The focus on children and results for children should be the driving force at each step of program planning and implementation. Partnerships between school and community can serve many practical functions. However, their main purposes are to enhance the learning and development of children. Questions that can structure discussions and decisions may include *What do we want for the children in our school and their families? What do we know about their education and well being now? What skills or resources do they need to successfully meet the goals we have for them? How will we know if we have made an impact?*

ESTABLISH SHORT-TERM GOALS

Although the scope of partnership programs can be large, it is strongly encouraged that smaller objectives be identified to make the task manageable, and to allow for the identification of success along the way. It is helpful to identify an issue or task that the partnership team can work on together where there is a likelihood of success. Examples may include organizing and hosting a family night for students and parents, conducting a health fair, or offering a class or in-service on accessing free community resources of interest or need to families. Celebrating small successes in the program can strengthen its vitality and contribute to its overall effects in a systematic way.

Maintaining School-Community Partnerships Through Interdisciplinary Action Teams

Just as schools cannot alone address the increasing needs of children and families, any one school professional is insufficient to institute change necessary to invoke broad-based partnerships involving schools, families, communities, and other stakeholders. It is generally recognized that the formation of *interdisciplinary action teams* (or resource-oriented teams) (Adelman & Taylor, 2000) can facilitate the work surrounding the design, implementation, and evaluation of school-community partnerships. Such teams "provide essential mechanisms for starting to weave together existing school and community resources and encourage services and programs to function in an increasingly cohesive way ... (they) are also vehicles for building working relationships and can play a role in solving turf and operational problems; developing plans to ensure availability of a coordinated set of efforts; and generally improving the attention paid to developing a comprehensive, integrated approach for addressing barriers to student learning" (Adelman & Taylor, 2000, p. 21). Representatives of several programs, agencies, services, and constituencies can be included on the team. Likewise, it is important to involve several professionals from within school settings, such as school psychologists, social workers, counselors, administrators, health educators, and others who have different areas of expertise that can be used to contribute to program development.

The precise functions of resource/action teams can vary, depending on the unique situations and contexts within which individual teams function. Among the various responsibilities for which teams can be responsible are analyzing existing activities and resources; evaluating structures and procedures currently in place; assuring quality in practices related to referral and case management; facilitating effective channels for communication among staff, community, and families; and exploring ways to enhance resources (Adelman & Taylor, 1999).

Several qualities have been identified as important for relationships on school-community action teams. These include mutual respect, trust, clear communication, self-disclosure, and friendship (MacGillivary & Nelson, 1998). Likewise, early objectives of action teams involve creating a welcoming and friendly climate for partners; clarifying a mission to guide the process; deriving working principles (ground rules); and identifying strengths of different partners and approaches (Nelson et al., 2000).

Although interdisciplinary teams are essential to integrating services and developing effective school-community partnerships, school psychologists are in a unique position to be effective participants and leaders. Knitzer (1997) points out that psychologists are well suited to perform several key functions that are essential to service integration. First, school psychologists are uniquely qualified to take a leadership role in many activities that are essential for the development of successful integrated school-community partnerships such as developing a shared vision, decision-making forum, and framework for problem solving. Second, given their knowledge of clinical and developmental issues, school psychologists may ensure that integrated programs and partnerships take into account current psychological research on child and family development. Third, school psychologists have a large role to play in the area of outcome research and program evaluation. This is an essential area as much of this research has been poorly conceived and executed in the past, limiting our knowledge of what makes a successful school-community partnership (Knitzer, 1997).

BEST PRACTICES IN SCHOOL-COMMUNITY PARTNERSHIPS

Although there is limited empirical research investigating school-community partnerships, several authors (e.g., National PTA, 2000; Nelson et al., 2000; Minke, 2000; Welch & Sheridan, 1995) offer useful guidelines and steps for establishing school-community partnerships to assist in the development of effective school-community partnerships. Following are guidelines for maximizing the success of school-community partnerships and steps for their implementation.

Guidelines for Maximizing the Success of School-Community Partnerships

Knowledge of basic guidelines or strategies can facilitate the development and implementation of school-community partnerships. Some helpful guidelines are listed in Table 2. First, when establishing school-community programs, *plan them carefully and systematically*. Effective partnership programs are organized in a way that is responsive to the needs of their constituencies, and thoughtful in their design. Second, *manage the partnership carefully*, with committed leadership. Strong, effective leadership should guide the processes and procedures associated with program implementation. Third, *build flexibility into your program* (Sheridan, 1995). This refers to the ability of a school-community program to respond to changing constituent needs, and flexibility in financial and funding policies.

Another important guideline in establishing school-community partnerships is to *involve participants in all phases of the program*. Individuals from groups including families, students, school personnel, neighborhood groups, local clubs, and other community stakeholders can be involved in the development, implementation, and evaluation of school-community programs. Participant-driven programs are more likely to yield higher levels of ownership and commitment than those administered in a top-down fashion.

A fifth guideline suggests that implementers *incorporate training and professional development into the program's structure*. Training that focuses on interdisciplinary competencies, as well as procedures for program implementation and evaluation, is paramount. Such training can allow individuals from across professional domains and community agencies to learn collectively strategies for effective communication, problem solving, conflict management, and other processes associated with collaboration. It can also provide opportunities for the program implementers to learn procedures for the day-to-day operation and management of the partnership program.

Sixth, it is encouraged that program planners *incorporate new, innovative techniques for evaluating outcomes into the program's design*. Traditional program evaluation methods have not proven effective in assessing the success of complex school-community partnerships. Evaluating collaborative programs is very complex and requires new ways of approaching assessment. Approaches such as participatory action research and related qualitative methodology seem particularly fruitful in this area (Kratochwill & Stoiber, 2000; Nastasi, 2000).

Steps for Establishing School-Community Programs

Nelson et al. (2000) provide useful steps for creating and implementing partnership programs, which are presented in Table 3. These include creating partnerships by including community members and creating a welcoming environment; clarifying values and deriving working principles; identifying and merging respective strengths of the partners; defining and analyzing the problem or task collaboratively; develop-

Table 2. Guidelines for establishing effective school-community partnerships

- Plan partnership program carefully and systematically.
- Manage the partnership carefully, with committed leadership.
- Build flexibility into the partnership program.
- Involve participants in design, implementation, and evaluation.
- Incorporate training and professional development into the program structure.
- Use new, innovative techniques for evaluating outcomes of the partnership program.
- Be an effective role model.
- Create opportunities for relationship development.
- Attend to resource development.
- Set priorities and collaborate judiciously.
- Be persistent.

ing a program and ensuring the availability of resources; and evaluating the steps and outcomes collaboratively. Along with tasks and processes associated with each step, important challenges for school psychologists are enumerated.

Programmatic steps of a partnership process are those associated with problem solving models in general (see Tilly, this volume). First, it is essential to conduct a *school-community needs assessment* to identify particular problems, needs, and priorities. It is strongly recommended that all participants (including school personnel, community representatives, families, students, and other relevant stakeholders such as clergy, neighborhood clubs, or local government) engage in a needs assessment to increase their ownership and commitment to the program that is ultimately developed (Durlak, 1997; Johnson, Malone, & Hightower, 1997). Needs assessments can be conducted through interviews, surveys, or group meetings (e.g., focus groups). Whatever format is used, concrete

Table 3. Steps in the implementation of partnerships for program implementation: tasks, processes and challenges

Steps	*Tasks and Processes*	*Challenges for School Psychology*
Create partnerships.	• Include community members and service providers from the community with whom the intervention is to take place • Create a welcoming and friendly climate for partners.	• Abandon the role of the expert and share power with partners. • Reduce barriers to participation for partners. • Learn to value and build relationships.
Clarify values and vision and derive working principles.	• Collaboratively clarify values and vision to guide the program. • Derive working principles (ground rules) for how the group and program should work.	• Engage in self-reflective analysis of personal values. • Be open to being challenged by partners. • Be aware of value incongruence and strive to reduce it.
Identify and merge the strengths of different partners and approaches.	• Identify and build on strengths of different partners. • Merge deductive/nomothetic and inductive/experiential approaches to planning and implementation.	• Work to overcome self-doubt and mistrust of community members. • Value the experiential knowledge of community partners. • Find common ground and respect differences to bridge the worlds of community members and professionals.
Define the problem collaboratively.	• Collaboratively define and analyze the problem in terms of risk and protective factors at multiple ecological levels. • Focus on the strengths of the community.	• Reconcile differing views and build consensus regarding a prevention program model.
Develop the program collaboratively.	• Collaboratively decide on what type of program to implement. • Ensure that necessary hardware and software are available for program implementation.	• Educate and train partners in research and evaluation. • Be open to learning new perspectives and ways of working from partners. • Clarify roles.
Research and evaluate collaboratively.	• Use both deductive (quantitative) and inductive (qualitative) approaches in program evaluation. • Research and evaluate each of the steps.	• Educate and train partners in research and evaluation. • Learn to see community members as valuable partners in research and evaluation. • Clarify roles of partners.

Adapted with permission of Lawrence Erlbaum, Inc. From Nelson, G., Amio, J. L., Prilleltensky, I., & Nickels, P. (2000). Partnerships for implementing school and community prevention programs. *Journal of Educational and Psychological Consultation, 11*, 121–145.

and specific information should be elicited. Although the needs assessment process may be time consuming, it is critical in maximizing the overall meaningfulness and effectiveness of partnership programs (Welch & Sheridan, 1995). When paired with an analysis of existing programs and resources, data from the needs assessment can provide "a sound basis for formulating strategies to link with additional resources at other schools, district sites, and in the community and to enhance use of existing resources" (Adelman & Taylor, 2000, p. 21). Only then can programs be developed that are responsive to the needs of the community.

One outcome of the needs assessment is the *establishment of goals and objectives for the school-community partnership*. Through the investigation of needs shared by the school, community, and constituencies (e.g., students and families), specific priorities and objectives for school-community programs can be identified. Goals will further assist in the articulation of a program's scope and purpose. It is recommended that members of school-community teams identify both short-term and long-term goals and objectives to structure and organize their efforts. Desired outcomes should also be identified to assist in subsequent ongoing evaluations of the program. Such accountability is important to ensure continued progress toward established goals.

Second, an *ecological analysis* should be conducted to identify factors that contribute to or maintain the current situation/problem, and resources that are available to contribute to program implementation. Issues that contribute to the need can be explored, including characteristics of the community, school, families, and children. Likewise, human, material, technological, financial, and informational resources that can help address the issues should be identified.

Third, members of the school-community team can together *develop a plan* to meet the needs and begin working toward shared goals. Collaborative problem-solving approaches encouraging innovative solutions can be explored when resources are brought together. As program plans are developed, it is recommended that one individual be responsible for ensuring that the details of the program are clear to all participants, the strategies are followed with integrity, and communication remains open. In some situations, a coordinator whose time is allocated specifically for oversight of the program may be important.

Specific written guidelines in the form of a management plan maximize smooth operation of the program. Implementing the school-community program requires that implementers engage in practices consistent with program design and in a manner that is responsive to the needs of constituencies and stakeholders. Effective and responsive programs emphasize accountability for results, rather than blind adherence to process. Finally, ongoing *formative and summative evaluation* is important to monitor the effects of the program in relation to predetermined goals. Shared decision making and implementation lead to shared accountability for results.

The guidelines and steps recommended are useful for a variety of types of school-community partnerships. In practice, school-community partnerships have evolved to address many diverse needs of students, families, and communities. The types of programs currently being developed demonstrate much innovation and often challenge traditional notions of how best to serve our nation's youth. Areas commonly targeted by school-community partnership programs include health and mental health, family needs, academic achievement, drop-out prevention, and gang membership. Likewise, increasing concern about the vulnerability of youth in today's society has prompted increased interest in developing collaborative programs to address concerns such as youth violence, substance use/abuse, sexual activity, stress, and suicide (Dryfoos, 1997). Below two areas often addressed in school-community partnerships—mental health and violence prevention and intervention—are discussed.

School-Community Partnerships and Mental Health Programs

Although programs involving school-community partnerships have been developed to address a diverse number of issues, it has been suggested that "when school-based clinic providers are asked what the largest unmet need is among their clients, they most frequently mention mental health counseling" (Dryfoos, 1997). Almost 3 million children and adolescents receive some kind of mental health service each year in North America (Weisz & Weiss, 1993). In addition, the number of youth in need of these services appears to continue to grow. Increased school-community collaboration offers an effective avenue to meet these growing needs and provide accessible, timely, affordable, and effective mental health services.

A project funded by the National Association of School Psychologists (NASP) and the Children's Services Committee identified essential components of exemplary school-community mental health programs in which school psychologists were involved (Nastasi, Varjas, Bernstein, & Pluymert, 1998). The results of this study indicate that school psychologists were not often mentioned in the mental health literature; however, it was emphasized that school psychologists may play a critical role in the development, implementation, and evaluation of school and community-based mental health programs. Although school psychologists are well trained to successfully address a wide range of mental health needs and coordinate school-community partnerships to meet the mental health needs of students, they frequently spend the majority of their time performing assessments to determine special education eligibility (Gutkin & Conoley, 1990). This leaves little time left for the provision of mental health services.

To make strides in the area of mental health service, school psychologists must strive to expand the range of services they provide. Educating school administrators, policy makers, parent groups, and community agencies about their training and competencies is essential (Sheridan & Gutkin, 2000). Each day, in every school in the nation, there are countless opportunities for school psychologists to get involved in mental health issues. To begin the process of change, school psychologists must above all else take action. Becoming involved in both direct and indirect service provision such as consultation, counseling, family therapy, parent training, and crisis intervention will place school psychologists in a better position to establish school-community partnerships to address mental health needs in schools.

Six key criteria that reflect best practices in developing successful mental health programs were identified through this project. Because these have been described elsewhere in this chapter, they will not be explored in detail here. The criteria of exemplary programs, as suggested by Nastasi et al. (1998), include (a) integrating theory, research, and practice; (b) ecological-developmental model; (c) collaborative-participatory model; (d) continuum of services; (e) program evaluation; and (f) school psychologist involvement.

In addition, school psychology training programs must work to change perceptions of the types of services school psychologists are able to offer.

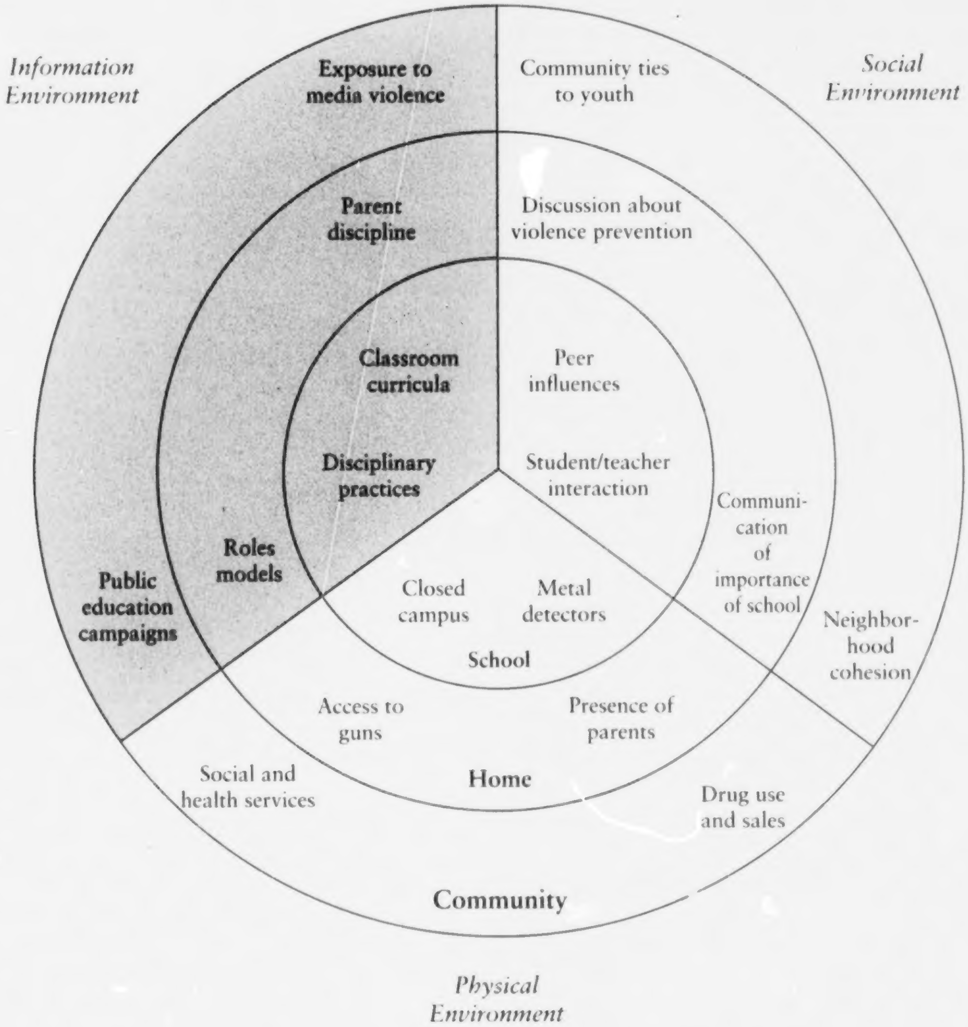
School-Community Programs and Violence Prevention and Intervention

With the increase in school violence in our nation's schools, school psychologists are asked to develop and implement prevention and intervention programs to combat school violence. Given the seriousness of school violence and the different forms that violence can take (isolated episode, bullying, assault), it is unrealistic to assume that one individual or even a small group of individuals can successfully impact the problem of school violence. The complexity of violent behavior requires an ecological approach to violence prevention. In fact, programs with only classroom-based components reported weak results (Howard, Flora, & Griffin, 1999). Additionally, family, community and peer risk factors (i.e., family conflict, violence in the community, deviant peers) primarily impact youth aggression outside of school (Reese, Very, Simon, & Ikeda, 2000). Therefore, the need to coordinate school and community efforts in violence-prevention programs is paramount.

Youth violence must be viewed from a broad, ecological perspective in order to develop effective intervention programs. A framework for understanding the complexity of youth violence has been proposed (Howard et al., 1999). This framework depicts the three areas in which youth function (school, home and community) and the different environs in which youth interact (information, social, and physical; see Figure 1). An effective school-community partnership to combat youth violence will address the complex and interactive nature of youth violence. The programs outlined below (Multisystemic Therapy (MST) and the Bullying Prevention Program) have demonstrated effectiveness in targeting youth violence at both ends of the continuum (chronic violent offenses to bullying), and represent model school-community partnerships.

It has been estimated that there are more than 300 violence-prevention programs available (Howard et al., 1999). Given that early antisocial behavior is a risk factor for subsequent delinquent behavior (Far-

Figure 1. A home-school-community framework for violence prevention.


Information Environment
Social Environment
Physical Environment
Exposure to media violence
Community ties to youth
Parent discipline
Discussion about violence prevention
Classroom curricula
Peer influences
Disciplinary practices
Student/teacher interaction
Roles models
Public education campaigns
Communication of importance of school
Neighborhood cohesion
Closed campus
Metal detectors
School
Access to guns
Presence of parents
Home
Social and health services
Drug use and sales
Community

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rington, 1989) and bullying behavior may be a precursor to more serious forms of antisocial behavior (Olweus, 1993), we have chosen to review two empirically validated programs—MST and the Bullying Prevention Program—that focus on these areas and emphasize school-community partnerships. Both programs are included as one of the 10 model "Blueprints for Violence Prevention" programs that have been published under the Center for the Study and Prevention of Violence at the University of Colorado at Boulder (Elliott, 1999).

MULTISYSTEMIC THERAPY

MST (Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998) is designed to reduce delinquent behavior in chronic violent offenders. The strength of MST is that it is based on Bronfenbrenner's (1979) social-ecological theory and involves the family, community, peer group, and the youth in treatment. MST targets violent, chronic, or substance abusing male or female juvenile offenders, ages 12–17. These youth are at risk for out-of-home placements, school failure, and social failure. The goal of MST is to help these youth in their natural setting in order to facilitate change. The major thrust of MST is to empower caregivers with the skills and resources needed to raise difficult teenagers. Additionally, youth are taught coping skills in order to deal with family, peer, school, and community problems.

MST is a comprehensive, child-centered, community- and family-based treatment designed to ameliorate serious antisocial behavior in juvenile delinquents (Henggeler et al., 1998). This therapeutic approach views the individual's functioning from a social-ecological perspective. As such, interventions are designed to occur at the individual, family, peer, school, and community levels. MST focuses on the importance of interagency linkages and collaboration. The juvenile justice system, welfare, mental health, family court, and the schools work together to develop a systematic plan for rehabilitation versus punishment of adolescent offenders.

The primary goals of MST are to (a) reduce youth criminal activity, (b) reduce substance abuse and other types of antisocial behavior, and (c) decrease rates of incarceration and out-of-home placements. A home-based model of service delivery is the foundation of MST. This facilitates access to treatment and allows for intensive services to be provided. Additionally, a home-based model of service delivery helps ensure treatment maintenance.

The average duration of MST is 60 contact hours over 4 months. Individual family needs determine the frequency and duration of services provided. Therapists are divided into teams consisting of three to four therapists. A treatment team may provide services for approximately 50 families per year. Weekly supervision is provided to therapists and a high level of clinical support is critical for successful implementation. Table 4 outlines the key characteristics of the MST model.

MST has been shown to be effective in the treatment of serious juvenile offenders. Evaluations of MST have shown (a) reductions of 25–70% in long-term rates of re-arrest, (b) reductions of 47–64% of out-of-home placements, (c) extensive improvements in family functioning, and (d) decreased mental health problems for serious juvenile offenders (Borduin et al., 1995).

In MST, Ph.D. school psychologists will most likely function as clinical supervisors of MST therapists. Specialist-level school psychologists will likely be a part of the assessment team of the child or adolescent referred to MST. One barrier to successful MST is high family-school conflict (Henggeler et al., 1998), and school psychologists who are trained in home-school consultation are uniquely suited to help reduce family-school conflict in order to facilitate the implementation of MST. Thus, school psychologists can function as supervisors, assessors, and consultants in the delivery of MST.

BULLYING PREVENTION PROGRAM

Previous research has found that 75% of school-aged youth report having been bullied at least one time during their school years (Hoover, Oliver, & Hazler, 1992). Therefore, bullying may be one of the most pervasive forms of violence in our schools (Batsche & Knoff, 1994). The Bullying Prevention Program (Olweus & Limber, 1999) targets both elementary and middle school students and addresses the multifaceted nature of bullying and victimization. This program has been implemented in Norway, the southeastern United States, England, and Germany. Substantial reductions in bullying and victimization have been reported (more than 50%) as a result of this

Table 4. Components of child-centered, community-based MST model

- Low caseloads (i.e., 3–6 families per full-time therapist).
- Services are provided in the family's natural environment (home, school, and neighborhood).
- Services are time-limited; typically 3–5 months.
- Therapists are members of treatment teams.
- On-call status of at least one member of the team (i.e., 24 hours per day, 7 days per week).
- Appointments scheduled at the family's convenience.
- Daily contact via phone or face-to-face.

program. Specifically, several outcome studies have demonstrated the effectiveness and applicability of the Bullying Prevention Program (Hanewinkel & Knaack, 1997; Melton et al., 1998; Olweus, 1993; Olweus, 1994; Olweus & Limber, 1999; Whitney & Smith, 1993). Additionally, a "dosage-response" outcome has been reported, with a greater number of essential components of the program being linked to larger reductions in bully-victim problems (Olweus & Limber, 1999).

Table 5 presents an overview of the components included in the Bullying Prevention Program. The Bullying Prevention Program has as a goal to develop school and home environments that are characterized by (a) warmth and positive involvement by adults; (b) the setting of firm limits for unacceptable behavior; (c) predictable, non-hostile, non-physical consequences applied for unacceptable behaviors; and (d) adults as positive role models and authority figures (Olweus & Limber, 1999). The comprehensive nature of the Bullying Prevention Program emphasizes community and school involvement to establish an environment where bullying behavior is not tolerated at school, at home, and in the community.

In practice, a school psychologist can function as the on-site coordinator of the Bullying Prevention Program. Additionally, the school psychologist will be a member of the Bullying Prevention Coordinating Committee and can help coordinate aspects of the program (e.g., the school conference day) to increase awareness of bullying problems.

SUMMARY

The social realities of American youth indicate the dire need for health, mental health, educational, social, and other service agencies to work together in coordinated, systematic ways. The establishment of school-community partnership programs is inevitable for American schools—and youth—to thrive in the twenty-first century. School psychologists are in a pivotal position to promote, develop, and coordinate such programs. However, the task requires more than simply will and effort. In many cases it will require a reconceptualization of philosophies that school psychologists embrace. First, it requires school psychologists to think ecologically and systemically. That is, it calls on school psychologists to consider variables in a child's ecology (e.g., families, schools, neighborhoods, communities, agencies, peer groups) as potential clients, influences, and resources. Second, it requires school psychologists to assess their own role constructs in defining personal and professional responsibilities, activities, and priorities. Third, it requires school psychologists to communicate actively, visibly, and convincingly with other influential entities (e.g., school district and building administration, state legislatures) about the necessity of collaborative programs to support the needs of children and families, and to make efficient use of valuable resources. Finally, it requires school psychologists to become as prepared as possible (through additional education, training, and/or supervision) to grapple with the enormous complexity of school-community partnerships.

In this chapter we have attempted to articulate the foundations for and benefits of school-community partnerships, guidelines and steps for implementation, and example programs. Importantly, from an ecological perspective, the program developed and implemented in individual schools must be unique

Table 5. Community, school, and individual components of the bullying prevention program

Level	*Component*
Community	• Parent meetings (e.g., P. T. A.) • Volunteer study groups (parent circles) • Increase knowledge of bully/victim problems
Class	• Class rules against bullying • Regular class meetings with students • Meetings with parents of a class
Individual	• Serious talks with bullies and victims • Serious talks with parents of involved students • Teacher and parent involvement with targeted students

and responsive to the conditions within that community. Further, relational and not simply structural features of the program will be important to its overall success at meeting constituent needs. Given their training in data-based decision making, communication and collaboration, and program design and evaluation, school psychologists have a great deal to offer.

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Howard, K. A., Flora, J., & Griffin, M. (1999). Violence-prevention programs in schools: State of the science and implications for future research. *Applied & Preventive Psychology, 8*, 197–215.

The authors review school-based violence prevention programs published from 1993 through 1997. Classroom-based curricula were components of every program reviewed and one third of the programs involved changing the school or other environments (i.e., home and community). It appears that elementary school interventions and programs that address change in the broader school environment are more successful in ameliorating violent behavior than junior high and high school interventions. The authors discuss the need to utilize comprehensive services that integrate community and home in violence-prevention programs. Additionally, the authors discuss the need for improved program evaluation: "There is little evidence to suggest the efficacy of any curriculum used alone or the superiority of any program over another" (p. 207). Thus, they note the need for evaluating the effectiveness of comprehensive intervention programs to help guide decision making.

McMahon, T. J., Ward, N. L., Pruett, M. K., Davidson, L., & Griffith, E. E. H. (2000). Building Full-Service Schools: Lessons learned in the development of interagency collaboratives. *Journal of Educational and Psychological Consultation, 11*, 65–92.

In this article, the authors begin by providing a brief yet useful summary of the history of school-community collaboration. This history is then expanded into a discussion of the concept of full-service schools. The main section of the article consists of a summary and discussion of 10 primary problems that have hampered the authors' efforts of establish full-service schools. This discussion provides helpful information to guide future efforts at establishing school-community collaboration within the context of full-service schools.

Nelson, G., Amio, J. L., Prilleltensky, I., & Nickels, P. (2000). Partnerships for implementing school and community prevention programs. *Journal of Educational and Psychological Consultation, 11*, 121–145.

These authors emphasize the importance of values and partnerships in planning and implementing community-based prevention approaches. They propose six steps that may serve as a guide for individuals as they plan and implement prevention programs in partnership with other stakeholders. Each step is expanded with examples from the authors' work in prevention initiatives.

U.S. Department of Education. (1995). *School-linked comprehensive services for children and families. What we know and what we need to know.* Washington, D.C.: Author.

This concise report summarizes the findings of a working conference focused on identifying a research and practice agenda on school-linked comprehensive services for children and families. The conference was based on the belief that schools cannot provide all the services that children and families need on their own. This group of researchers, service providers, family members, and representatives from federal agencies summarize major themes and current research, and provide direction for future research in this area.

24 Best Practices in Working With Culturally Diverse Children and Families

Samuel O. Ortiz and Dawn P. Flanagan
St. John's University

OVERVIEW

> On the whole...we are inadequately prepared to deal with cultural diversity.
>
> —Honigmann, 1963, p. 1

Separating oneself from culturally based ethnocentric viewpoints inculcated from birth by way of natural social interaction is a daunting task. The very essence of what an individual believes, thinks, and does is a product of unique background and developmental experiences that are most often shaped and determined primarily by culture. Even simply understanding the manner in which all humans are profoundly defined by culture and how it has led directly to the acquisition of almost every precious truth and deeply held conviction requires considerable effort and insight. Matsumoto (1994) notes, "sometimes we cannot separate ourselves from our own cultural backgrounds and biases to understand the behavior of others" (p. 6). Nevertheless, with respect to its impact on practice, school psychologists who work with students and families from diverse backgrounds must seek to understand the manner in which culture influences both their own view of others, and other's view of them.

If a reasonable set of guidelines for engaging in best practices with culturally diverse children and families is to be suggested, then the first and foremost principle must be this one: that any individual's own culture greatly affects the way they view the world and others, including people from both within and outside the culture. In working with students, families, teachers and administrators who come from cultural backgrounds and experiences quite different than those that typically comprise the U.S. mainstream, it is crucial to understand that these differences will affect the very things that school psychologists are often interested in, for example, learning, development, and behavior. It is equally important to recognize that there will be differences that are difficult to comprehend, appreciate, or accept and that such situations do not represent issues of right or wrong, good or bad, rational or irrational, but merely differences between people.

The task of delineating a framework for working with children and families from diverse cultural backgrounds hinges upon successful integration of a wide variety of practice-related topics—some of which have their own separate chapters (e.g., considering the role of culture, working with bilingual children, nondiscriminatory assessment, etc.). In order to work effectively with diversity in the schools, psychologists will need to develop competence in the skills and knowledge bases related to these areas and be able to integrate them in a manner that guides cross-cultural interactions. The issues and guidelines to be presented here are based largely on those presented in the preceding version of this chapter (Flanagan & Halsell Miranda, 1995). Unlike topics that can undergo considerable change in short periods (e.g., assessment), what was best practice over half a decade ago in working with diverse children and families still remains, for the most part, best practice today. Although it is acknowledged that what constitutes best practice in working with diverse children and families is not a topic area that changes considerably over time, it is nonetheless not an easy skill to acquire and maintain. Thus, one of the main reasons why there is a continued need for this information to be included in volumes such as this relates to the fact that school psychology training programs do not appear to provide sufficient direct supervision or instructional opportunities necessary to promote development of such competency (Geisinger & Carlson, 1998). The lack of culturally competent supervisors and trainers makes it difficult to incorporate such skills or knowledge into training regimens and school psychology curricula beyond the single course requirement needed to maintain accreditation. Consequently, the vast majority of school psychologists are sent into the nation's increasingly diverse schools wholly unprepared for interactions with diverse students, families, teachers, administrators, and fellow school psychologists. This chapter is intended to provide school psychologists with the information they will need and will seek, as diversity is met in the schools.

BASIC CONSIDERATIONS

Increasing Diversity

If the diversity of the U.S. population were constant and relatively unchanged, then it is likely that competency in working with culturally diverse children and families would remain a distant priority and largely unnecessary for those rare cultural encounters. But this is not the case. And although there is hardly a chapter on diversity issues that does not provide an abundance of demographic data to buttress the point, the statistics bear repeating here. By the year 2025, it is estimated that the U.S. population will increase to approximately 335 million people (U.S. Bureau of the Census, 1996). By itself, increased numbers of people are of little surprise. However, upon closer inspection of the data and the estimates upon which they are based, it is projected that 61% of the total growth over this period of time will come from Hispanic and Asian groups. By the year 2025, the Hispanic and Asian groups combined are projected to form almost a quarter of the entire population (24%) or about one in every four Americans. In addition, it is anticipated that other non-white groups will increase proportionately (Hispanic, Native American, African-Americans, etc.) whereas the percentage of Americans from European descent will decline. Growth patterns are predicted to be quite variable, with the greatest increases expected in California, Texas, and Florida as well as the southern and western portions of the United States (U.S. Bureau of the Census, 1996). Trends in the general population tend to reflect trends in the school population and it is clear that school psychologists will need to buttress their expertise in this area of practice.

The impact of increasing diversity is not limited to traditional definitions of the term that are based most commonly on cultural differences as a reflection of racial or ethnic differences. The concept and composition of families are transforming, creating new cultural systems based on dynamics apart from race or ethnicity. The percentage of traditional, nuclear families in the United States has been declining steadily while the percentage of single parent, step parent, grandparent, adoptive, foster, and same-sex parent families has been increasing (Copeland & White, 1991). Moreover, poverty has long been identified as a variable that meets most major definitions of culture and is an important influence in school performance (Hanson & Lynch, 1992). Similarly, people with disabilities represent a group whose experiences are becoming increasingly recognized as falling within the conceptual definitions of diversity and culture. Even diversity based on ethnic and racial differences has undergone significant changes. As people from different cultures continue to intermarry, the relatively "clear" delineation of race or ethnicity and the concomitant cultural idiosyncrasies that often accompany them will begin to disappear as they are blended into the mainstream and are subsequently expressed in new and unique ways (Frisby, 1998; Sandoval, 1998a).

The need to be comfortable and competent in dealing with children and families that come from nontraditional, non-white backgrounds will not lessen in the future. On the contrary, if the projections are accurate, such skill will become increasingly more important. School psychologists will need to recognize when their own values and beliefs impact their services to individuals whose backgrounds, experiences, and circumstances are distinctly different from those accustomed. Failure to appreciate the manner in which one's own culture influences interactions with individuals from a different culture can often lead to conflict, miscommunication, and misunderstanding, having tremendous impact on the nature and effectiveness of service delivery.

Definitions

The phrase "culturally diverse" differs slightly from the phrase "culturally different." Although there is much similarity between the two, the connotations of "diversity" are less severe than those from "different." The term "diversity" almost begs an inclusive, pluralistic perspective whereas "different" seems to set the stage for exclusion. Thus the phrase culturally diverse is preferable and will be used here. However, diversity does imply difference and it is acknowledged that the basis for establishing diversity rests on the premise of some type of difference among individuals or groups. The key, then, is the nature of those differences. Cultural diversity does not represent differences solely or strictly on the basis of racial or ethnic heritage. Although these factors are often associated with cultural differences, they are not in fact the same, as will be discussed. In general, cultural diversity refers to the unique background and experiences that have influenced, to the greatest degree, an individual's development (physical, emotional, cognitive, etc.). It is the existence of particular environmental elements and their unique influence on an individual or a group that comprises the essence of culture. School psychology in the United States has traditionally been practiced within the context of U.S. mainstream culture. Therefore, cultural diversity refers to any individual or group whose backgrounds and experiences differ significantly from that reflected by the U.S. mainstream. This definition helps to avoid the error of treating culturally diverse children and families as coming from a unitary, monolithic heritage and keeps the focus squarely on the fact that any two people from any single culture are similar only in that their respective backgrounds differ from that of the mainstream and perhaps from the school psychologist also. They may also differ significantly from each other. The following definitions are offered in an attempt to clarify the many dimensions along which cultural differences may exist.

CULTURE

It seems rather curious to have to point out that cultural diversity may exist as a function of cultural differences. What could be more obvious? Nevertheless, much confusion continues to surround the notion of culture probably because of its many connotations in the scientific literature and the popular vernacular. For example, culture may refer to the "characteristic patterns of living, customs, traditions, values, and attitudes that are associated with broad differences in intercontinental habitation or a society's level of technological sophistication" (Frisby, 1992, p. 533), as well as differences in language or religion. Those cultures that produce advances in technology and become industrialized are seen as "modern" whereas those that do not are seen as "primitive." Another definition of culture occurs when the term is included with a modifier that is intended to refer to a circumscribed group of individuals. The use of such phrases as "Deaf culture," "culture of poverty," "Western culture," "culture of the school," etc., are examples of culture defined in this manner (Frisby, 1998). Although the use of modifiers to specify particular groups of people may be valid in a general sense, it is important for school psychologists to understand that not every single individual from even the most circumscribed culture will display any or all of the features commonly associated with it. Individual differences do persist.

Perhaps the most common definition of culture revolves around the values, beliefs, and attitudes that are relatively unique to a given group of individuals and expressed in communal ways. A good example of this definition was put forth by Matsumoto (1994) who described this elusive concept "as the set of attitudes, values, beliefs and behaviors, shared by a group of people, communicated from one generation to the next via language or some other means of communication" (p. 4; see also Barnouw, 1985). Within the context of this definition, culture is seen as representing an element of consensus among a group of individuals regarding what is important and what will be maintained by the members and the children of the members of that group in particular. In this sense, culture is both a unique and shared experience that has idiosyncratic but predictable effects on virtually every aspect of development of its constituent members.

In sum, culture must not be viewed as "a rigidly prescribed set of behaviors or characteristics, but rather a framework through which actions are filtered or checked as individuals go about daily life"

(Hanson, 1992, p. 3). Individuals of the same cultural background will definitely share certain tendencies, but they will not necessarily behave in the same way. Other factors, including gender, age, socioeconomic status, area of residence, and level of education will also greatly affect behavior, beliefs, perceptions, attitudes, etc. (Hanson, 1992). Without question, the degree to which any individual follows the prescribed assemblage of cultural patterns under which they were raised varies considerably (Frisby, 1998; Hanson, 1992). When attempting to engage in best practices, school psychologists will need to remain well aware of the subtleties inherent in any definition of "culture" and avoid making any assumptions or generalizations that may be inappropriate or incorrect.

RACE AND ETHNICITY

Although these terms are often used interchangeably, they are quite distinct and each carries its own separate meaning with respect to culture. Ethnicity is much narrower in scope than race and reflects "a microcultural group or collectivity that shares a common history and culture, common values, behaviors, and other characteristics that cause members of the group to have a shared identity" (Banks & Banks, 1993, p. 357). The similarity between this definition of ethnicity and the previous definition of culture is noteworthy. On the whole, there is not much difference, but ethnicity tends to be even more confused with notions of race than culture. "Race" is simply a biological concept and refers to phenotypically distinct groups without reference to any other distinguishing qualities. Members of any given race may comprise a multitude of different ethnic and cultural groups. Race is much broader in scope than either culture or ethnicity and should not be equated with either. Rather, cultural traits represent the main attributes of an ethnic group whereas biological traits determine race (Banks & Banks, 1993). Understanding that neither race nor ethnicity automatically imply that an individual has had a cultural experience that is similar, let alone identical to any other member of the same racial or ethnic group, prevents the school psychologist from making attributions or generalizations that are unfair and untrue (Helms & Cook, 1999). This is particularly important in the assessment arena where interpretation is often based on notions of race or ethnicity without consideration of whether or not cultural experiences do in fact differ significantly from the mainstream. Good decision making in working with culturally diverse children and families requires a solid grasp of the distinctive characteristics of race and ethnicity as limited markers of culture.

MINORITY

The term "minority" has fallen out of favor as of late, perhaps in recognition of the fact that some previous minorities are now the "majority." In California for example, Hispanic children slightly outnumber Anglo children (California Department of Education, 1997). To call Hispanics a "minority" group is not only statistically inaccurate, it could be viewed as pejorative—a sort of semantic way of keeping diverse groups marginalized. The U.S. Census Bureau (1996) estimates that by the year 2050 the distribution of the population according to ethnic group in the United States will be such that no single group will represent a majority.

The term minority has historically carried implications regarding lack of privilege(s) or access to the mainstream, in particular the upper social strata. Members from minority groups have often been viewed as being disadvantaged (due to such factors as limited opportunity for educational or economic advancement) and treated unfavorably by the majority group (Helms & Cook, 1999). This notion has even crept into legislation for example, the Individuals with Disabilities Education Act (IDEA) contains the following wording: "the team may not identify a child as having a specific learning disability if the severe discrepancy between ability and achievement is primarily the result of…environmental, cultural or economic disadvantage" (§330.541). The idea of economic disadvantage seems appropriate, but there is nothing inherently disadvantaged about being culturally different. In considering issues of culture, it is perhaps best to avoid most conceptions of it as related to "minority" group status, except in one way. When minority status has resulted in unfavorable treatment or systematic oppression of members by the majority in power, the effects of being rendered underprivileged in this way may adversely affect the psychological well-being of the group's family life (Tseng & Hsu, 1991) and/or strengthen family or group bonds. But again, it is the experience of the oppression that is responsible for the influence on development, not the fact that an individual or family simply belongs to or identifies with any particular minority group.

SOCIOECONOMIC STATUS

The effects of socioeconomic status (SES) on the development of students and families, particularly within the school realm, have become so well known that it is not uncommon to refer to life under very low SES conditions as the "culture of poverty." Huang & Gibbs (1992) have demonstrated that social class has a profound impact on essentially every variable that influences an individual's physical and psychological growth and development including educational attainment, occupational aspirations, lifestyles, selection of friends, activities, and social roles. Experience (i.e., being raised) in one socioeconomic stratum versus another tends to delineate the range of opportunities, the kind of choices, and the degree of challenges that are available to individuals and their families (Huang & Gibbs, 1992). It can even affect the quality of the schools, buildings, and teachers.

Race or ethnicity should no longer be equated with social class or culture. Although the historical and socio-political history of the United States has created a rather high correlation between race and SES, they are not linked by necessity nor so easily circumscribed. Nevertheless, the U.S. mainstream continues to hold fast to notions that being white, heterosexual, non-disabled, and middle-class reflects high status whereas being anything else reflects lower status (Helms & Cook, 1999). Consequently, impressionable children may learn to devalue themselves and their own culture as they attempt to assimilate into the mainstream—often in vain because of racially based differences in physical features that belie Anglo or Caucasian heritage (Ortiz, 1999). School psychologists should therefore consider SES as an independent, albeit highly interrelated, cultural variable that influences development across a broad spectrum of individual functioning.

ACCULTURATION

Much like the preceding discussion on culture, ethnicity, and SES, the manner in which acculturation influences all forms of behavior in children and families rests upon issues of differential experiences, not merely differences. According to Salvia and Ysseldyke (1991) "acculturation is a matter of experiential background rather than of gender, skin color, race, or ethnic background" (p. 18). The standard by which acculturation is measured depends greatly on context and purpose. In the United States, where evaluations of student performance or behavior are conducted in the schools, the de facto standard is represented naturally, by comparisons with mainstream North American culture that implies English language proficiency and values reflecting predominantly Anglo or Western-European views. Thus, whenever the experiences of an individual, family, or group differ markedly from those of individuals who comprise the U.S. mainstream, expectations regarding functioning, performance, or behavior must be examined within the context of level of acculturation.

A number of authors have discussed ways of understanding acculturation in a variety of contexts. In his discussion of acculturation, Padilla (1980) describes a model that emphasizes cultural awareness, ethnic loyalty, and five dimensions of acculturative change (viz., language familiarity and usage, cultural heritage, ethnic pride and identity, inter-ethnic interaction, and inter-ethnic distance). Hoover and Collier (1985) described different sociocultural explanations for withdrawn, defensive, disorganized, and aggressive behaviors as exhibited by students that can be kept in mind when referring culturally and linguistically different children for special education. Sattler (1998) described factors affecting acculturation (e.g., history of migration experience), ways in which people deal with acculturation (e.g., marginality, assimilation), and suggestions for questions that can be posed during diagnostic interviews to help assess for a client's level of acculturation (e.g., inquiring about the language the client uses to speak with various family members and friends).

Atkinson, Morten, and Sue (1989) outlined five levels of acculturation that describe the manner in which diverse individuals or groups react to the dominant culture. The first level, conformity, is characterized by behavior that devalues cultural differences while at the same time praising the dominant culture. Dissonance, the second level, is defined primarily as a time of intra-psychic conflict where personal views regarding cultural differences shift between degrees of acceptance and rejection. Resistance and immersion form the third level of acculturation and is evident in patterns of general behavior that begin to show appreciation for cultural differences coupled with a certain degree of disdain for the majority culture. Introspection is the fourth level and is best described as a process whereby individuals attempt to explore the basis of their attitudes, in particular those that represent a liking of themselves and their inherent cultural differences. And last, synergetic articulation and awareness comprise the fifth level of acculturation wherein individuals come to appreciate both the cultural differences that exist, as well as particular aspects of the majority culture. Patterns of acculturation tend to be related to familial generations. The level at which an individual may fall on the acculturation spectrum is related to such issues as whether they represent the first among their family to come to the United States (but were not born here), versus their children who were born and raised in the United States (who are often bicultural and bilingual), to their grandchildren who were born and raised comfortably in the U.S. mainstream (and often speak English only).

Acculturation is not, however, a natural or invariant process. Many individuals or groups may deliberately choose to cling tightly to precisely those things that provide them with a sense of identity, even if it retains a measure of cultural difference. For some, acculturation is viewed as the process of assimilation whereby the native values, beliefs, and customs are gradually lost and replaced by the values, beliefs, and customs of the dominant culture (Ortiz, 1999). Consequently, different members of the same family may be at different points in terms of their level of acculturation. For example, highly impressionable young children may feel no loss in assuming new and culturally different social roles than their middle-aged parents. This difference in acculturation may even create acculturative stress (i.e., tension and disharmony within the family) and disrupt the family hierarchy. It is not uncommon in first-generation families to see the role of parents and children reverse, particularly when the child has acquired better English language proficiency than the parent and begins to act as liaison between the family and mainstream society in certain social contexts (Huang, 1989; Huang & Gibbs, 1992; Tseng & Hsu, 1991).

Knowledge regarding the level of acculturation for a family and the individuals who comprise the family provides an important perspective from which the school psychologist can develop plans for service delivery. Given the varying degrees of acculturation that may be experienced by culturally diverse children, families, and educators and its attendant impact on the attitudes, values, and beliefs held by them, the importance of assessing and evaluating acculturation levels carefully prior to engaging in any service delivery activities should not be overlooked.

Multicultural Training and Education

Despite the increasing diversity of the U.S. population, in particular within the schools, training and education toward cross-cultural competency development remains largely inadequate. With few exceptions, training programs that prepare individuals to work with diverse children and their families do not include large numbers of students from differing ethnic, cultural, and linguistic groups (Hanson, 1992). Multiculturalism, cross-cultural competency, and even bilingual assessment tend to enter the graduate school curriculum in the form of a single course, not always taught by individuals with significant professional training or education in these particular issues and not always including supervised experience with diverse children or families. Training and education directed toward development of competency in cultural skills and knowledge too often fall into a format perpetuated by books built upon the notion of "chapter cultures," that is, one chapter on African-Americans, one chapter on Native Americans, one chapter on Hispanics, one chapter on Asian Americans, etc. Such instruction is doomed to failure because true competency is unlikely to ever develop simply from reading a book (Frisby, 1998). Moreover, such courses rarely emphasize the importance of understanding one's own culture first before attempts are made to understand others (Lynch & Hanson, 1992). Consequently, as was discussed previously, failure to appreciate the manner in which one's own culture influences interactions with individuals from a different culture can often lead to difficulties in social interaction that negatively affect service delivery.

The solution to the question of engendering true cultural competence is rather simple, but the implementation is admittedly difficult. Many training programs have already seen the value of recruiting students from diverse backgrounds in order to both provide the school system with a source for psychologists with the desperately needed cultural knowledge bases and the opportunity for students to gain experiences in cross-cultural transactions during their graduate training. Other programs have already worked on expanding university curricula to include an emphasis on multicultural education (Banks, 1993; Hanson, 1992) but the efforts must move beyond notions of single courses and seek earnestly to provide experiences commensurate with the needs and expectations found in the course of actual practice (Geisinger & Carlson, 1998). In the meantime, school psychologists and other service providers have little choice but to attempt to develop cultural competency largely on their own—again, a major reason supporting the need for a chapter such as this. Books, articles, workshops, and other continuing education opportunities on issues related to cultural competence will form the bulk of the education and training school psychologists will likely receive once they have graduated from their programs. But whatever methods are employed to gain the skills and knowledge necessary for effective service delivery, school psychologists must develop and maintain respect for the inherent difference and value of other cultures as well as the notion that differences do not always imply disorders (Hanson, 1992).

BEST PRACTICES IN WORKING WITH CULTURALLY DIVERSE CHILDREN AND FAMILIES

Cultural Competence: Knowledge

SCHOOL CULTURE

Cultural competence is based partly on skills and partly on knowledge bases. School culture represents primarily a knowledge base. To understand the school as a culture unto itself, one only needs to ask whether the abbreviations IEP, IDEA, LD, ED, MR, ESL, etc., have any meaning to the lay person not employed in the schools. What seems to be perhaps the most public of our institutions is in reality a culture that is understood poorly by those outside of it (e.g., politicians, employees in other fields, and sadly, even parents) and only slightly better understood by those within it. Schools have rules, expectations, and norms for all sorts of functioning including behavior, language, attitudes, etc. There is little, if anything, that occurs in the schools that does not reflect the U.S. mainstream culture in one way or another. Samuda, Kong, Cummins, Pascual-Leone, and Lewis (1991) recognized that:

> We took for granted, also, the cultural orientation of the [White, Anglo-Saxon Protestant (WASP)] mainstream. The school was, in fact, a reflection of the middle class societal norms and teachers were frequently the purveyors of information couched in terms of a collective mindset that almost totally disregarded any kind of minority sociocultural perspective (p. vii).

The influence and the impact of the schools as a culture should not be minimized. Apart from the "book" learning that is taking place, much more is being learned in the school system. The very culture that gave rise to the public school system ensures that it teaches the values mirrored by society. Public school curricula are often based more on political and social agenda than on sound pedagogy (e.g., passage of Proposition 227, known as the "Unz initiative," in California in 1998 that greatly limited the implementation of primary language programs, or the continued efforts in various states to introduce "creationism" as an alternative scientific explanation or direct replacement for evolution as the origin of life on earth). What is taught in our schools is not there by mistake or chosen at random. It is chosen precisely and deliberately to espouse a particular point of view, a particular set of attitudes, beliefs, and ideology that mirrors the values held dearly by the mainstream culture.

The problem for the school psychologist is not that the dominant culture dictates the culture of the school. In fact, there have been significant advances in correcting some of the more egregious inequities perpetuated by culturally based ethnocentrism (e.g., the omission of historical and scientific contributions from non-white Americans, portrayals of Native Americans as uncivilized and obstacles to progress, views of slavery purely from political and economic viewpoints without regard to the toll on individual human beings and families, etc.). Rather, the problem for school psychologists lies in recognizing school as a culture and understanding the manner in which the system operates to inculcate a particular set of values in each and every student in attendance. As diverse children are imbued with these values, the effects can be broad and far reaching with potentially devastating consequences. Consider the following excerpt:

> Racism is often characterized, albeit facetiously, as an inherited disease—you get it from your parents. I guess I was lucky; I did-

> n't get it from mine. Like so many other unsuspecting children, I went out and got it from a more authoritative source, school.... I was infected with a far more insidious strain that taught me to hate my *own* people because they were different than what society said they should be...speaking Spanish simply wasn't allowed in school. Bilingual education was but a distant dream, and I was expected to learn English immediately upon entering kindergarten, never mind that my parents could barely speak it.... By second grade, my teacher placed me outside the classroom in a small group where I was teaching other Spanish speaking children how to read in English. I distinctly remember feeling superior to these children aspiring to be as proficient as I was in English.... It wasn't that anyone ever said anything to me overtly, and it wasn't that my parents didn't value their own culture or language. There just always seemed to be a clear, unspoken norm that English was *better* than Spanish and that being white was *better* than being brown. It wasn't based simply on being different; it was a question of value. White culture was superior to all other cultures, including mine (Ortiz, 1999, p.10, emphasis in original).

The possible effects of the culture of the school are indeed powerful ones. Best practices dictates that school psychologists fully understand the learning context that exists in each and every school and recognize that the context will differentially affect the learning and development of each and every student. Students whose backgrounds and cultural experiences are not consonant with the values taught in school may respond in ways that run counter to the typical educational expectations. Conversely, the very same children with diverse backgrounds and cultural experiences may respond in ways that are quite consistent with the public school system norms, as expressed in the quote above. In each case, the effects can be considerable (especially with respect to intra-familial relations or school-family relations) and it will be incumbent upon the school psychologist to carefully assess the forces that have shaped the individual and have served as the underlying influences on their development. When diverse children and their families are in need of educationally related services (e.g., counseling, assessment, consultation, behavior modification, instructional intervention, etc.) success will hinge in large part on the identification of the dynamics and similarities and differences in culture between the individual or family and the school.

FAMILY CULTURE

There is probably no greater arena in which the influence of culture operates more directly than within the immediate family. It could even be said that each family represents a unique culture in and of itself (Frisby, 1998). Development of a knowledge base that serves as the foundation for understanding the manner in which family systems work and how they represent cultural entities and transmit culture across generations, is crucial to the proper selection and design of educational services by school psychologists (Helms & Cook, 1999; Leigh, 1998). It is, however, well beyond the scope of this chapter to examine every aspect of families as cultural systems. Consequently, only a brief cross-cultural perspective of how family systems function will be presented and the reader is referred to Tseng and Hsu (1991) for a more comprehensive discussion.

"Family" is defined as "the basic sociocultural unit...the nest for the growth of an individual, the resource for social support, and the institution through which culture is transmitted" (Tseng & Hsu, 1991, p. 1). Although it is not the only method by which culture is passed on to new generations, the family group nevertheless plays a significant role in cultivating the growth, development, and psychological well-being of its children (Lewis, Beavers, Gossett, & Phillips, 1976). Families, as groups, are likely to come into contact with school psychologists or other service providers when a school-age member of the family has or is suspected of having a disability. Contact may occur informally (e.g., telephone contact, home visit) or more formally through some type of pre-referral process or actual referral for special education evaluation. Depending on the background, experiences, and familiarity with the school system, engagements with the family may be welcomed or they may be seen as threatening (Hanson, 1992). For example, families from many Hispanic and Latino backgrounds typically view the school system as entirely capable of handling any and all situations with their children. They generally seek not to interfere and when called upon by the school or school staff, even for innocuous or positive reasons, Hispanic families are likely to suspect that they are actually being summoned because of problems with their child. Naturally, they feel a great deal of embarrassment because the behavior of one member of the family is seen as a reflection of the family as a whole and thus they often arrive at meetings with a strong sense of shame and obsequiousness at having to intrude upon the teacher's or psychologist's turf (Dana, 1993). Similarly, the respect for educators within Hispanic families is quite large, and they are unlikely to provide much discussion or feedback, let alone critique, of recommendations offered for intervention services (e.g., special education services). School psychologists should be careful not to mistake the strong sense of respect accorded to all educators as a sign of passivity or disinterest in their child's education. Rather, the respect is so strong that it precludes doing anything that even gives the slightest appearance of disrespect and it carries an almost ironclad sense of trust. The educator is viewed as the professional and to question their decisions would be unthinkable (Dana, 1993).

School psychologists can provide culturally relevant services to families of different cultural backgrounds only if they understand the fundamental cultural aspects of family systems and function such as those just described. The particular aspects of family systems that may be most relevant to school psychologists would include variations related to marriage, residence, kinship, structure, power, and roles (Tseng & Hsu, 1991). Boyd-Franklin (1989) points out, for example, that with respect to family structure, African-Americans will likely have at least some regular involvement with extended family members. For this reason, she emphasizes the need for any service provider working with African-Americans to take the time to learn about the relationships that children and immediate family members have with extended family members. In similar fashion, Ruiz and Padilla (1979) suggest that it is important to remember that in addition to nuclear family relationships Latino family relationships include certain formalized kinship relations such as that of the godfather.

In summary, there are many different aspects of the family that need to be considered by the school psychologist from a cultural perspective. An understanding of the economic, political, ecological, and social conditions that play a role in shaping families' unique cultural patterns will aid in providing an individualized approach to service delivery, where intervention is tailored to the families' needs. Combined with knowledge regarding the school as a culture, a knowledge base regarding family as a culture will enable school psychologists to respond sensitively and effectively to families whose cultural practices differ from that of the mainstream or even their own.

Cultural Competence: Communication

In general, school psychologists who speak the same language(s) as the families they serve may have more effective interpersonal interactions than those who do not. The comfort level felt by parents or children who may not be fluent in English when given the opportunity to express themselves in their native language(s) is a substantial contributor to rapport (Helms & Cook, 1999). Effective communication is not, however, based solely on verbal or signed interchanges, but very often on nonverbal or gestural expression as well. The need for competence in the former (verbal or signed communication) can often be attained with the assistance of an interpreter/translator. Competence in the latter (nonverbal communication) will likely require application of a general knowledge base and perhaps even some cultural training from an individual familiar with the culture of the child or family to be served.

The amount of information that is communicated explicitly through verbal means versus that communicated through nonverbal means or contextual clues varies considerably from one culture to the next (Hall, 1976). In cultures where there is more use of high-context communication (e.g., Asian, Native-American, African-American, Latino) meaning is derived typically through shared experience, history, and implicit messages. In contrast, in cultures where the norm is based more on low-context communication (e.g., Anglo-European, American, Swiss, German, Scandinavian) meaning is derived primarily from direct, precise, and logical verbal interchanges (Dana, 1993). Communication norms within the culture of the school appear to be reflective of the low-context modality. Not surprisingly, misunderstandings between school psychologists and families may arise when the normal level of context typically used by each to communicate on an every day basis, differs significantly. Individuals from high-context cultures, for example, may perceive specific verbal directions, detailed examples, and extensive elaboration as insensitive and mechanistic whereas individuals from low-context cultures may feel uncomfortable with personal conversation, silence, obscure phrases, or unfamiliar gesturing. School psychologists should attempt to observe family communication patterns, as appropriate, or consult with an individual who may be familiar with the culture of the family in order to determine what level of context the family uses to communicate. This information will enable school psychologists to adjust their style of communication to match that of the families with whom they work, thereby increasing rapport and the likelihood of success with proposed interventions (Hanson, Lynch & Wayman, 1990; Lynch, 1992).

The use of an interpreter/translator can often assist considerably in managing communication between a school psychologist and a student or family. Interpreters/translators should be trained, however, specifically for the tasks they will be asked to perform. Finding an individual at the last minute and pulling him or her in to translate at a meeting shows lack of prior planning and could easily be seen as very disrespectful. Care should also be taken in matching the student's and the family's particular dialect. The expressions typically used by one cultural or ethnic group (e.g., Puerto Rican or Cuban) can differ markedly from the expressions used by another cultural or ethnic group (e.g., Mexican) even though each ostensibly speaks the same language, Spanish. The dialectical and regional variations may well create a sense of discomfort, awkwardness, and even conflict because the common usage of certain words and expressions from one ethnic group may be quite offensive to members from different ethnic groups. Beyond these considerations, school psychologists must ensure that interpreters/translators are used properly. The interpreter/translator should be seated in a manner that facilitates communication between the school psychologist or other professional and the parent or child. The interpreter/translator should not be used as a representative for the school or as an advocate for the parent and should be trained only to interpret and not offer opinions (often a strong temptation because the parent tends to build rapport with the interpreter). When speaking, the school psychologist should make it clear that they are speaking to the parent, not to the interpreter. Although it is awkward at first, the interpreter/translator should remain a background figure at all times, never the center of attention or the focus of the interaction. An interpreter should also be licensed, follow the professional Code of Ethics, and be compensated appropriately.

As stated previously, verbal communication is not the only method of communication in which school psychologists should seek to develop skills. Nonverbal communication and miscommunication can have dramatic effects on the nature of the relationship between a school psychologist and members of a family. For example, prolonged eye contact between individuals in Latino cultures is considered disrespectful, and any eye contact between a child and an adult is equally disrespectful. Similarly, eye contact between two strangers in some Asian cultures is regarded as shameful (Randall-David, 1989; cited in Lynch, 1992). Other nonverbal behaviors such as specific facial expressions, interpersonal distance (small for Hispanic and Asian cultures, larger for Anglo culture), type of physical contact permitted (e.g., a hand shake, hug, slap on the back), and gestural language are influenced greatly by culture and differ as a function of age, gender, religion, and personal preference as well as professional status and economic background. In the absence of concerted effort and sustained study, the average school psychologist is unlikely to learn all the culturally appropriate ways of communicating and behaving. However, with assistance, consultation, and informed readings, it is very possible for school psychologists to acquire enough skill and knowledge related to the more salient patterns of nonverbal communication within a given culture. Particularly important are the behaviors and gestures that show respect (e.g., bowing in Asian cultures, using titles and calling others by surnames only, no first names, in Hispanic cultures) (Dana, 1993; Lynch, 1992) and the often ritualized methods of greeting and dismissal.

Mastery of even a few skills related to showing respect or saying hello or goodbye in an appropriate manner can pay large dividends in the success of school psychology service delivery. Behaviors such as these tend to put the family at ease. For example, Hispanics tend to begin any function with polite talk about issues not directly related to the purpose for the meeting. To "get right down to business" would cause some discomfort for Hispanics as the more common method of attending to matters of import is to first spend some time in small talk about other issues (e.g., the family, health, work) and allow the conversation to turn naturally from personal things to the issue at hand. Engaging in such practices is not difficult, but may feel a little awkward to the school psychologist or other educator who feels time pressures bearing down on them. Engaging children and families successfully will require patience, effective listening skills, and a willingness to take the time necessary to establish mutual goals. Attempts to show deference, respect, and cordiality to diverse children and parents as well as diverse educators may not always be completely successful, but efforts and attempts to do so will likely be very much appreciated.

Despite the need to learn about some of the particulars of a culture and their manifestation in any given student or family, the most important component of effective communication is represented by the school psychologist's ability to view and appreciate the world from the family's perspective(s). Intervening effectively with students and families will come more from a genuine respect of their native values, beliefs, and attitudes than anything else that might be said or done, especially when their views run counter to beliefs that may be held so dearly. In such cases it must be remembered that school psychologists are not often in positions where they are designing interventions for themselves. Rather, the intervention is for others and they will only be successful in so far as they are culturally relevant to the children and families for whom they are intended.

Cultural Competence: Skills

Cultural competence is not a discrete skill or set of facts. To view cultural competence in such a light would be a great disservice. As mentioned at the outset, cultural competence represents the integration of a wide variety of knowledge bases and specific competencies that encompass many aspects of work with diverse children and families. Cultural self-awareness represents the first step to developing skill and competency in cross-cultural service delivery (Helms & Cook, 1999; Leigh, 1998; Lynch, 1992). This was recognized in the introduction to this chapter where the ability to serve diverse children and families was stated to come from an appreciation of the impact of one's own culture(s) on perceptions of self and others from both within and outside the culture. School psychologists should strive to develop keen insight into how one's own values, beliefs, experiences, attitudes, languages, and customs have been molded by culture. Shweder (1986) put it succinctly, "the best way to get inside yourself is to go outside yourself, and as any good ethnographic knows, if you cannot find yourself in the other, you are not going to find yourself at all" (p. 38).

SELF-AWARENESS

The need to recognize school systems as cultural entities and the values that they infuse into the curriculum were discussed previously. The basis of the values being indoctrinated by society into children in the schools, and in children and families outside the school (e.g., through the media), comes from mainstream U.S. culture. Typical North American values are derived primarily from Western European influence and tend to emphasize individualism, independence, autonomy, interpersonal competition, mastery, equality, punctuality, materialism, progress, and a future orientation. Moreover, there are elements of our culture that value interactions that are more informal as opposed to formal, that display a high regard for individual achievement, and that foster pride in direct and assertive interactional communication styles (Helms & Cook, 1999; Leigh, 1998). School psychologists who understand the extent to which they identify with each of these values will be in a better position to determine how the values that they adhere to most strongly affect their practice (Leigh, 1998; Lynch, 1992). Moreover, they will be more likely to appreciate the influence that mainstream culture is having on the development and functioning of culturally diverse students, families, and colleagues.

Self-awareness involves recognition of differences in one's own world view from that of others. For example, school psychologists who tend to value independence and autonomy in young children or who believe in promoting the attainment of developmental milestones and correcting slight deviations from the norm, may have considerable difficulty understanding why some Native-American and Hispanic-American parents seem to have a relaxed attitude toward their children's achievement of self-reliance (Huang & Gibbs, 1992). Similarly, school psychologists who tend to value individual achievement and interpersonal competition may find themselves at odds with families who come from a cultural background that values interpersonal affiliation, cooperation, and reciprocity (e.g., Hispanic-American families). And finally, school psychologists who tend to believe that the source of a child's disability lies in physical phenomena rather than spiritual factors will need to work through the dissonance that may result from interactions with parents who are committed to spiritual rather than medical treatments (e.g., some Southeast Asian groups) or some fundamental forms of "mainstream" religion (e.g., snake holding, immersion in water) (Chan, 1986; Harry, 1992). Clearly, the extent to which a school psychologist's own cultural values differ from those of other cultures as well as the extent to which adhering strictly to those values affects service delivery to diverse children and families is a necessary requirement for engaging in best practices. Honest and genuine cultural self-awareness and appraisal provides the foundation from which the cultural elements of others can be best understood and brought to bear on improving personal and working relationships with diverse students and families.

DATA GATHERING

School psychologists spend a significant amount of time in activities that are designed specifically to collect information that serves a variety of applied purposes including assessment, evaluation, consultation, and counseling. In all of these components of service delivery, specific information about cultural elements relevant to the purpose for collection helps significantly in being able to understand the values, beliefs, and behaviors operating to define functioning or behavior of any kind. Not only does such knowledge affect the manner in which any collected data might be interpreted, but it also influences the very nature of the data that are sought and collected in the first place and how these data are later defined and used. For example, when a school psychologist hypothesizes that poor academic work may be the result of a disability, all interview questions, all observations of behavior and performance, all meaning ascribed to information contained in school records, and all data from testing may be interpreted within the context of providing support, not refutation, of the presumption of dysfunction. Cultural factors that may have significant relevance to and influence over the precise meaning of all of the data are dismissed, ignored, or left uncollected because the presumption steered data gathering efforts in a particular manner that did not include or place much importance on such factors (Sandoval, 1998b). In order to avoid errors in practice of this nature, school psychologists should adhere to gathering culturally-relevant information in line with the following principles:

1. *Establish rapport and build trust.* Use the knowledge bases regarding displays of respect, and appropriate greeting behavior and exiting behavior. Help the family to feel at ease, respected, and provide the opportunity for the family members to fully participate and contribute to the process of service delivery. Use interpreters/translators as necessary but make sure they are appropriately trained and consult with individuals who are familiar with the culture and languages relevant to the purposes of service delivery.

2. *Identify the presenting problem.* School psychologists should listen carefully to the family's perception of any suspected problem and attempt to understand it from their perspective. They may feel there is no problem at all. It is also necessary to determine the family's past efforts to resolve the problem and to elicit their present understanding of new intervention strategies and goals. Once these issues have been clarified, the school psychologist will be in a much better position to negotiate intervention strategies.

3. *Learn the family system.* The structure of the family system must be assessed and determined to the maximum extent possible. Particularly important to evaluate are the areas related to family composition, family members' roles and responsibilities, family's interactional patterns, family's support system, family's childrearing practices, and the family's beliefs about the student's suspected handicapping condition and its source. Knowledge of the relevant aspects of the structure of the family system provides the basis for interventions that are appropriate and individually tailored to the particular needs and resources of the family.

SUMMARY

This chapter provided school psychologists with both the background information and the methods necessary from which to begin to develop greater competency and skill in providing services to diverse children and families. Several key concepts were defined in an attempt to aid school psychologists in determining the important dimensions along which families differ, including culture, ethnicity, race, socioeconomic status, and level of acculturation. In addition, a framework for understanding how family systems function was presented from a cross-cultural perspective and strategies for developing cross-cultural competence were offered. The final section contained in this chapter included a discussion on best practices that centered around three areas of competence including knowledge, communication, and skills as well as practical guidelines for gathering culturally relevant information about families.

Until recently, little attention has been given to developing cross-cultural competence and understanding the manner in which cultural differences affect school psychology service delivery. Achieving cultural competence is an intentional and challenging process that requires individuals to take risks, lower their defenses, and set aside their own beliefs in an attempt to appreciate another's point of view. It is expected and not uncommon for individuals who have just begun to foster development of cultural competence to have some encounters with diverse students or families that have proven to be uncomfortable or less than successful. The rapidly changing demographics of the U.S. population with respect to diversity leaves many school psychologists faced with the challenge of providing services to culturally diverse children and their families for which they may not be well prepared. The absence of substantial and systematic training, education, and supervision toward the development of cultural competence creates a strong need for relevant information and useful strategies applicable to service delivery to diverse children and families. The information and specific strategies offered here are meant to serve as a readily accessible compendium for school psychologists searching for assistance. Despite the existence of a chapter of this type, it must be recognized that acquiring cultural competency and skills is a lifelong process. Developing cultural competence does not happen overnight and one cannot expect to know everything there is to know about every culture. However, through an open mind and a willingness to implement new ideas, acquisition of specific strategies will enable school psychologists to work effectively and sensitively with culturally different families as well as enable families to feel comfortable about their interactions with service providers. Learning about another culture and developing the skills necessary to communicate effectively with its members is a process that begins with the very first family with whom school psychologists work and with deliberate effort improves steadily over time as cross-cultural interactions and experiences increase.

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This book is predominantly geared toward social work practice. Nevertheless, both the information and the strategies offered for developing cultural competence are equally applicable to the school psychologist. There are excellent exercises and materials within that make it a very useful tool for advancing one's own competency.

Lynch, E. W., & Hanson, M. J. (Eds.). (1992). *Developing cross-cultural competence: A guide for working with young children and their families*. Baltimore: Brookes.

Part I introduces issues regarding provision of services to diverse families with a focus on developing intercultural effectiveness. Part II describes the history, values, and beliefs of the major cultural and ethnic groups in the United States. Part III offers suggestions and recommendations for working with diverse families.

Sandoval, J., Frisby, C. L., Geisinger, K. F., Scheuneman, J. D., & Grenier, J. R. (Eds.). (1998). *Test interpretation and diversity: Achieving equity in assessment*. Washington, DC: American Psychological Association.

This volume is more in line with assessment issues; however, the discussions surrounding issues of cultural and linguistic competence are excellent. The writing is clear and cuts across topic areas in school psychology to provide a framework for working with diversity that is practical and up to date.

Tseng, W. S., & Hsu, J. (1991). *Culture and family: Problems and therapy*. New York: Haworth.

This book offers a comprehensive overview of family systems from a cross-cultural perspective. Critical issues regarding family development, family subsystems, and family adjustment are discussed and cultural considerations in family assessment and therapy are presented.

25

Best Practices in Increasing Cross-Cultural Competence

Antoinette Halsell Miranda
The Ohio State University

"Diversity is not a choice, but our responses to it certainly are."

(Howard, 1999)

OVERVIEW

The rapidly changing demographics of the United States have increased the need for establishing a knowledge base in the area of cultural diversity. In 1998, among students enrolled in elementary and high school 63.8% were non-Hispanic white, 16.1% were non-Hispanic black, 4.1% were non-Hispanic Asian and Pacific Islander, and 14.3% were Hispanic (U.S. Census Bureau, 1998). About 19.8% (9.5 million) of elementary and high school students have at least one foreign-born parent, and 4.9% (2.4 million) of elementary and high school students are themselves foreign born. The vast majority of immigrants entering the United States are from nations in Asia and Latin America . In 1999, whites were 71.9% of the U.S. population; however, by the year 2025 those numbers will decline to 62.4% of the U.S. population. Those Hispanics living in the United States are projected to outnumber African Americans early in the twenty-first century. The United States Census Bureau (1998) projects that by 2025 Hispanics will be 18% of the U.S. population. Over the next 25 years, people of color are projected to increase in all parts of the country but especially in the south, southwest, and west. By 2025, people of color are expected to account for more than 50% of the population in four states (Hawaii, California, New Mexico, and Texas) and the District of Columbia. (U.S. Census Bureau, 1998).

Because psychologists are increasingly encountering people who are culturally different than they are, Sue, Bingham, Porche-Burke, & Vasquez (1999) felt it necessary to discuss the need for the profession of psychology to address issues of race, culture, and ethnicity. They advocate for a multicultural psychology to address the challenging issues of diversity. Multicultural psychology requires revolutionary change and can best occur through the implementation of cultural competence of all aspects of the profession (Sue et al., 1999). Many in the discipline of school psychology have also recognized this need, and as a result numerous researchers have suggested that school psychologists ought to address this growing need to have culturally competent professionals (Gopaul-McNicol 1997; Ramirez, Lepage, Kratochwill, & Duffy, 1998; Rogers, Ponterotto, Conoley, & Wiese, 1992).

Unfortunately, while our school age population is becoming increasingly diverse, our school psychology profession for the most part remains predominately Caucasian. The latest demographics of the profession found that only 5.5% of school psychologists in the field are people of color (Curtis, Hunley, Walker, & Baker, 1999). It is expected that limited representation of underrepresented groups will continue to confront the field of school psychology. Because of this increasing disparity between students and practitioners, it is essential that training programs provide students in school psychology with the skills to respond effectively to diverse populations. (Curtis et al., 1999.).

Over the past two decades, the two major organizations that represent school psychologists, the

American Psychological Association (APA) and the National Association of School Psychologists (NASP), have attempted to address this issue in a variety of ways. Diversity issues are addressed in the standards of both professional organizations (American Psychological Association, 1993; National Association of School Psychologists, 1995), and they both have standing committees dedicated to addressing the issue. APA has also developed Guidelines for Providers of Psychological Services to Ethnic, Linguistic, and Culturally Diverse Populations (American Psychological Association, 1993) and has approved resolutions that address issues of diversity in graduate education in psychology (American Psychological Association, 1987). NASP has established a minority scholarship fund.

Historically, despite the growing recognition that school psychologists need to acquire the knowledge and skills to be able to work with culturally diverse populations, diversity has not been reflected in school psychology literature. In an investigation of multicultural themes in school psychology literature over a decade and a half (1975–1990), Rogers Weise (1992) found that only 9% of the total articles in the three major journals (*Psychology in the Schools*, *Journal of School Psychology*, and *School Psychology Review*) reflected multicultural content. With respect to the focus of the research, 77% of empirical research was on assessment issues and the school psychologist's role as psychoeducational evaluator. In contrast, only 3% of the articles dealt with the impact of issues of culture and ethnicity and the role of consultant and counselor, and no studies dealt with the impact on other roles such as supervisor and program coordinator. A recent study (1990–1999) has found that the multicultural content of the four major school psychology journals has increased slightly from 9% to 10.8% (Halsell Miranda, & Gutter,, 2001). Six journal issues had diversity as a special topic, and these articles accounted for 25% of the total multicultural articles.

In school psychology, our cultural diversity literature has primarily focused on assessment practices particularly as it relates to assessment bias (Barnett et al., 1995). What we do goes far beyond assessment. To develop the essential knowledge and skills to respond to the increasingly diverse population, it is imperative that the field of school psychology increases its literature base in the area of diversity, particularly as it relates to the potential influence of cultural factors within work settings.

Several researchers have also expressed the need for more diversity training (Curtis et al., 1999; Ramirez et al., 1998; Rogers, Ponterotto, Conoley, & Weise, 1992). The challenge is how to train students to develop the skills they need to effectively work with diverse populations. How do we train school psychology students in the area of diversity so that they (a) are able to understand differences across cultures as well as differences within cultures, (b) are able to understand that there are more differences within groups than between groups, (c) understand the difference between stereotypes and sociotypes, and, most important, (d) become comfortable in discussing issues of diversity in their delivery of school psychology services?

It is a challenge that trainers of school psychologists need to examine. So many programs do not, or only minimally, infuse the content into their courses, and trainees often have limited access to minorities during their field experiences (Rogers et al., 1992.). Thus, many practicing school psychologists may not have been trained to work with children who are culturally different than they are. The purpose of this chapter is to provide a framework for school psychologists to recognize how culture can potentially influence the practice of school psychology and how to effectively work with children from a cultural perspective.

BASIC CONSIDERATIONS

There are important key concepts in working with culturally diverse populations that will help to illustrate the complexity of our diverse student population and to view students from a multidimensional perspective rather than a one-dimensional perspective.

Culture. "The ideations, symbols, behaviors, values, and beliefs that are shared by a human group" (Banks & McGee Banks, 1993, p. 357). Culture can be thought of as a blueprint, which guides people through everyday life. For some groups, culture is the group's program for survival and adaptation to environment (Banks & McGee Banks, 1993). Culture is learned, shared, an adaptation, and a dynamic system that changes continuously (Gollnick & Chinn, 1990).

Cultural group labels are used to identify groups of individuals that share many aspects of behavior and values. This is called a group's identity. This identity helps to create bonds between individual members of the group and to continue the group socialization process with children (Lynch & Hanson, 1998). However, it is critically important for practitioners to understand that "these labels only point to tendencies of members of that group" (p.17). The individual differences and within-group variations of cultural groups must be acknowledged. The challenge for practitioners is to learn how to use central or common tendencies as cues to understanding diverse populations instead of using those tendencies as blanket stereotypes that universally apply to everyone in that group.

Race. "A social construct that artificially divides people into distinct groups based on characteristics such as physical appearance (particularly color), ancestral heritage, cultural affiliation, cultural history, ethnic classification and the social, economic, and political needs of a society at a given period of time" (Wijeyesinghe et al., 1997, p. 88). Race is often viewed as a socially constructed concept. Unfortunately, we are a race-conscious society, and the concept of race persists and remains a primary basis for categorization in the United States.

Ethnicity. "A social construct which divides people into smaller social groups based on characteristics such as a shared sense of group membership, values, behavioral patterns, language, political and economic interests, history and ancestral geographical base" (Wijeyesinghe et al., 1997, p. 88). Ethnicity is often used interchangeably with race. While they are not the same, they often overlap.

Racial and Ethnic Identity. "An individual's awareness and experience of being a member of a racial and ethnic group; the racial and ethnic categories that an individual chooses to describe himself or herself based on such factors as biological heritage, physical appearance, cultural affiliation, early socialization, and personal experience" (Wijeyesinghe et al., 1997, p. 88). Ethnic identity can provide a framework through which growing children can view themselves and can provide meaning to the child's subjective experiences, structure to interpersonal relationships, and behaviors and activities (Gibbs & Huang, 1998).

Racism. "A belief that human groups can be validly grouped according to their biological traits and that these identifiable groups inherit certain mental, personality, and cultural characteristics that determine their behavior" (Banks & McGhee Banks, 1993, p. 359). The real crux of racism is that it goes beyond a belief. Racism is practiced by one group over another group. Usually because of larger size, one group has the power to enforce laws and norms based on those beliefs to oppress another, usually smaller and more fragile, group. Racism usually operates on three levels: individual, institutional, and cultural. At the *individual level*, it is the beliefs, attitudes, and actions of an individual that support or perpetuate racism. The individual generally has the belief that his or her race is superior to another. Individual racism can occur at both an unconscious and conscious level. *Institutional racism* "consists of those established laws, customs, and practices which systematically reflect and produce racial inequalities in American society" (Jones as cited in Bennet, 1995). It should be noted that those executing these practices might not have racist intentions. Institutional racism may be hard to detect, because it may be more covert. *Cultural racism* occurs when one (powerful) group imposes its cultural heritage upon other (less powerful) groups thus destroying the culture of the less powerful group (Bennett, 1995). Racism is a complex issue that includes attitudes, power, and an ideology of ethnocentrism or cultural superiority.

Prejudice. Rigid and unfavorable attitudes directed toward a group that are formed regardless of facts. A prejudiced individual responds to members of a particular group based on preconceptions, ignoring behavior or characteristics that may be inconsistent with biases (Banks, 1997).

Social Class. A dimension that describes and defines a person's world by ascribing a specific position and value to based on their socioeconomic status (SES) (Gibbs & Huang, 1998). Social class is a particularly important concept because it intersects with culture, race, and ethnicity, with all three becoming an interacting dimension of the child's life experience. "The family's SES will largely determine the child's social environment, lifestyle, level of education, and occupational aspirations" (p. 11). Often social class is a more important determinant than race or ethnicity.

What we sometimes consider "culture" is in fact a result of poverty.

Minority Group. "A group of people who because of physical and cultural characteristics, are singled out from others in the society in which they live for differential and unequal treatment, and who therefore regard themselves as objects of collective discrimination" (Wirth, 1945, p. 347).

Assimilation. "The process by which an individual or group acquires the culture traits of a different ethnic or cultural group" (Banks, 1997, p.72). Gordon (1964) described the assimilation process as developing through stages, with each stage representing a degree of assimilation. Cultural or behavioral assimilation is considered the first stage, and it is here that the cultural groups will have direct contact with the dominant group, which leads to eventual changes in the groups' original cultural patterns. Structural assimilation occurs when two groups share primary-group relationships, such as membership in social clubs (Gollnick & Chinn, 1990). The dominant group determines the degree of structural assimilation. "If the assimilation process is effective, it leads to the disappearance of a cultural group that is distinct from the dominant culture" (Gollnick & Chinn, 1990, p. 19). Some consider the true test of assimilation for cultural groups as the absence of prejudice, discrimination, and value and power conflict. For ethnic minorities in the United States, assimilation, by this test, has not happened.

Acculturation. A process by which the views and behaviors of one group are modified as a result of contact with another culture (Gopaul-McNicol & Thomas-Presswood, 1998). Banks (1997) described acculturation as occurring when two cultural groups exchange cultural elements, such as food, dress, and music. Unlike assimilation, groups that go through acculturation often maintain elements of their own culture. Acculturation is influenced by immigration status, exposure to other cultural groups, socioeconomic status, and educational level.

Training Issues

Understanding the key concepts of diversity is important because they are frequently used in discussions of diversity. In addition, the concepts are often used interchangeably (such as "ethnicity" and "race"). Thus, the real meaning may get lost. Training in the area of cultural diversity is not simply learning about racial, cultural, and ethnic groups, as was the major focus of early cultural diversity courses. In fact, this type of training often teaches broad characteristics of groups viewed as absolute truth, which only serves to stereotype. Cultural diversity training should help students understand how issues of race, class, and ethnicity are interrelated with politics, economics, and power. Issues of diversity are complex issues and should not be relegated to one course. Understanding diversity issues from a historical, sociological, as well as psychological perspective is important. Trainers as well as practitioners must not be fearful to address and confront the most difficult and often taboo topics, such as race, oppression, and social justice. Jacobs (1999) states that "race has become so toxic a topic in America that many of us are afraid to even touch it, at least in public, without some kind of industrial-strength protection" (p. 3). In order to make progress, we need to have open and honest discussions that will facilitate a better understanding about the issues and diminish our tendency to resort to understanding groups through stereotypes. A complete level of understanding takes time and commitment and a different worldview. "The ability to differentiate the general from the specific, the universal from the unique, is critical to effective work with children of all cultures and backgrounds (Gibbs & Huang, 1998, p.362).

BEST PRACTICES

Cross-Cultural Competence

Many researchers in the field of cultural diversity discuss the development of cross-cultural competence (Gopaul-McNicol, 1997; Pope-Davis & Dings, 1995); that is, the development of skills that enable the professional to be "competent, sensitive, and knowledgeable of the critical factors related to issues of cultural diversity to best serve minority students" (Gopaul-McNicol, 1997, p.17). Lynch and Hanson (1998) describe cross-cultural competence as "the ability to think, feel, and act in ways that acknowledge, respect, and build upon ethnic, sociocultural, and linguistic diversity" (p.50). The process of developing cross-cultural competence has been described by many, usually with some element of variation. However, all of those processes have in common three elements: developing a personal awareness, developing a knowledge of other cultures, and applying that knowledge.

DEVELOPING A PERSONAL AWARENESS

In order to be able to work effectively with another cultural group, people must first understand their own cultural heritage. Everyone has a culture. Members of the majority culture are often unaware of just how their culture has influenced their values and beliefs. Many have never really examined where they came from and how they got to where they are.

How we view the world is influenced by our experiences. Lynch and Hanson (1998) advocate searching for roots through an exploration of such things as family's origin, time of immigration, reason for immigration, and family's settlement in the United States. Other potential influences are languages spoken, religion, politics, economics, and socioeconomic status. This goes beyond simply doing a genealogy. A significant aspect of this self-examination is an analysis of the socialization process during development. Exploring our own cultural heritage allows us to develop an understanding of how we have been socialized to view the world.

The socialization process is often influenced by the family's values, beliefs, behaviors, and customs that are associated with cultural norms. Part of that exploration also includes a critical look at how we were socialized to deal with people different than ourselves as well as our own experiences with race. While it may be painful for some, it enables others to confront potential biases and prejudices that may have been a part of their socialization process. Knowing you have a bias gives you an indication, or warning, of where those biases may intersect with your professional, and personal, behavior. This self-awareness creates a foundation that you can use to learn, objectively, about other cultures and lifestyles without conscious prejudicial constraints. However, be aware that your unconscious bias must be dealt with, too.

DEVELOPING KNOWLEDGE OF OTHER CULTURES

There are a number of ways to develop a knowledge base about other cultures. Lynch and Hanson (1998) suggest that the four most effective ways are reading books, interacting with people from diverse cultures who can act as cultural mediators, participating in the daily life of another culture, and learning the language of the culture. Reading is probably the easiest and least threatening, though it should not be the only means by which information is gathered. Literature can provide diverse views of culture. Reading and understanding the historical context of other cultures can put many of the issues in perspective. Reading provides a broader perspective of cultures while helping the practitioner see the continuum of culture.

Interacting with people from diverse cultures who can act as cultural mediators is particularly helpful in learning more about their beliefs, values, and practices. Cultural mediators help bring what you have read to life and provide opportunities to ask questions about what you have read and/or experienced. Nothing is more powerful than hearing the experiences from somebody who lives it. Nuances of culture and cultural practices can be learned through cultural mediators as well. One must remember, however, that the cultural mediator is also sharing his or her culture through his or her personal lens.

Participating in the daily life of another culture or carrying out a cultural immersion experience is an excellent way to increase cross-cultural understanding. Participation in the life of another culture allows a symbolic and persuasive awareness and understanding. For many, this activity will be a challenge, but part of developing cross-cultural competence is taking risks.

Learning the language of another culture takes one of the strongest commitments, and probably is the most difficult to achieve, particularly for adults. Language is considered important because so much of culture is reflected in language.

APPLYING THE KNOWLEDGE

Considering culture in the practice of school psychology provides the practitioner with the opportunity to address issues of diversity in an effective and systematic manner with the goal of providing optimal services to a culturally diverse population. Having a personal awareness and a knowledge base of cultures are essential prerequisites to practicing school psychology cross-culturally.

Becoming cross-culturally competent requires taking emotional risks. It is not always uncomplicated and painless when discussing these issues and confronting them. It is important to listen to people with very different ideas and experiences. This does not necessarily mean you have to agree with everything you hear. Different perspectives are just that: different ideas, different ways of looking at the same thing. It may require you to learn to relook, reconceptualize, reexamine, and rethink, and it is the beginning of practicing school psychology in a cross-culturally competent manner. In applying the knowledge and understanding concepts such as identity development and dual socialization may be helpful in your attempt to determine whether culture is a factor that is affecting the problem situation.

Identity Development. Tatum (1997) states "identity development as integrating one's past, present, and future into a cohesive, unified sense of self is a complex task that begins in adolescence and continues for a lifetime" (p.20). Culture shapes identity. "Identity is influenced by a culture's language, social structure, rituals, and taboos in terms of how one views situations and events, particularly outside of their culture" (Baruth & Manning, 1999, p. 30). Identity development is a continuing process, but significant development occurs during adolescence and can include religious beliefs, values and preferences, gender roles, career goals, and ethnic identities. "While all adolescents struggle with identity issues, not all adolescents think about themselves in racial terms" (Tatum, 1997, p, 53). School psychologists working in multicultural settings need to understand both culture and development. "Understanding one entity without understanding the other limits the [school psychologist's] ability to intervene, especially with [students] of differing cultural backgrounds." (Baruth & Manning, 1999, p. 31).

Research has documented the relevance of racial and ethnic identity theory (Cross, 1995; Helms, 1995). The identity models tend to be stage models, which have the "advantage of considering race-related adjustment as a dynamic process that can be modified" (Helms, 1995, p. 182). School psychologists working with middle and high school students may find identity development to be an important variable to consider. Phinney and Tarver (1988) studied black and white eighth graders from an integrated urban junior high school who were on the search for identity. They found that among the 48 participants, more than a third were considering the effects of ethnicity on their future. Not only were they considering it, but also discussing it with family and friends and learning more about their ethnic group. While both groups were beginning to think about ethnic identity, the results suggested that blacks were more engaged in an active search. Tatum's (1997) research on black youth in predominantly white communities yielded results consistent with Phinney and Tarver's findings. She believes environmental cues that trigger an examination of racial identity become particularly evident in middle school.

A phenomenon sometimes seen with African-American youth in the middle and high school years is "oppositional identity." Oppositional identity has been described as an "oppositional stance [that] both protects one's identity from the psychological assault of racism and keeps the dominant group at a distance" (Tatum, 1997, p. 60).

> Sometimes the emergence of an oppositional identity can be quite dramatic, as the young person tries on a new persona almost overnight. At the end of one school year, race may not have appeared to be significant, but often some encounter takes place over the summer and the young person returns to school much more aware of his or her Blackness and ready to make sure that the rest of the world is aware of it, too. There is a certain "in your face" quality that these adolescents can take on, which their teachers often experience as threatening (Tatum, 1997, pp. 61–62).

Often these students, as a positive coping strategy, will only affiliate with others from their same racial group as a source of support. The problem with oppositional identity from Tatum's point of view is that these adolescents are operating from a limited definition of what it means to be black, based largely on cultural stereotypes.

Thus, the consideration of racial and/or ethnic identity of students can be used as a tool for helping the practitioner understand the issues the student may be facing not only personally but also academically.

Dual Socialization. As was discussed before, culture occurs on a continuum and is influenced by the process of dual socialization. Dual socialization is "the process of bicultural socialization through which minority parents teach their children how to function in two distinct sociocultural environments" (DeAnda cited in Gibbs & Huang, 1998, p. 12). This important concept helps explain some of the variability within cultural groups. DeAnda believes six factors influence the outcome of the process of dual socialization:

> (1) the degree of overlap or commonality between the two cultures with regard to norms, values, perceptions, and beliefs; (2) the availability of cultural translators, mediators, and models; (3) the amount and type of corrective feedback provided by each culture regarding a person's behaviors in the specific culture; (4) the congruence of conceptual and problem-solving styles of the minority individual with those of the mainstream culture; (5) the individual's degree of bilingualism; and (6) the degree of similarity in physical appearance to the mainstream culture (Gibbs & Huang, p. 12).

Individuals who are able to negotiate two cultures successfully are said to be bicultural. Sue and Sue (1977) identified three variables to assess in students of color in determining the impact or influence of culture. These also influence the socialization process and can affect the continuum of biculturalism. The variables are culture-bound, language-bound, and class-bound. *Culture-bound variables* include knowledge of the cultural background, attitudes, and norms. *Language-bound variables* are knowledge of the family's first language, immigration history, and acculturation level of the family. *Class-bound variables* include the family's socioeconomic status and its impact, community experiences, and the family's aspirations.

Ecological Perspective

The use of an ecological perspective as proposed by Bronfenbrenner (1979) fits nicely with the idea of viewing a child in a cultural context. An ecological perspective views the child as an active participant in a system that is connected at all levels. Deficits are not seen as existing within the child, which has been the traditional way of looking at children's problems, but, rather, as aspects of the child's environment, ranging from the family and the school systems to the community and even the larger society. Deficits are evaluated for their potential impact on the child. Many families of color, particularly those that live in poverty, experience a number of ecological stressors that have a negative impact on their children's lives. "The ecological perspective is especially relevant in analyzing the impacts of poverty, discrimination, immigration, and social isolation on the psychosocial development and adjustment of minority children and youth" (Gibbs & Huang, 1998, pp. 6–7).

The Ethnic Validity Model

While suggested guidelines are helpful for cross-cultural practice, methods for systematically considering ethnicity and culture with assessment and intervention are needed (Barnett et al., 1995). A model developed by Barnett et al. (1995) shows promise as a framework for assisting school psychologists in conducting culturally relevant practice. The Ethnic Validity Model uses a problem-solving orientation that systematically considers cultural differences. The problem-solving model will not be detailed here (please refer to Tilly, this volume).

There are three key elements to the Ethnic Validity Model. The first key element is a *problem-solving orientation* that looks at problems holistically. In addition, the foundation of the model includes (a) establishing an advocacy role for the population being served and (b) accepting, respecting, and understanding the cultural values, perspectives, and behaviors of the population being served (Barnett et al.,1995). Throughout the problem-solving model professionals are always considering the cultural context as well as potential influences of culture on the problems situation.

The second key element is *acceptability*. This involves the participant's acceptability of the interventions being considered. There is a commitment to developing interventions that are compatible with the needs, values, and customs of the participant. Thus a participant's culture could be considered a factor in determining intervention acceptability.

The third key element is *teaming*. As teams use the Ethnic Validity Model, there are core features that support it. The core features of teaming are interaction and collaboration, ethnic group representation and participation, and distributed decision-making power. The ethnic group representation is seen as important in that it provides some measure of expertise with respect to culture. However, it should be noted that while this is an important feature, in reality it might be difficult to carry out, particularly in districts that are predominately white and where there are few staff members of color. In addition, some those staff members may choose not to serve in the role of being an expert on their culture. A solution may be the use of the community as an active participant of the teaming process. However, logistically this may be difficult. Another solution may be to hire a consultant whose expertise is cultural diversity. While this consultant may not be "present" at the teaming process, the consultant can help the team to evaluate its decisions within a cultural context.

Consideration of cultural variables should occur throughout all stages of the problem-solving model. Not considering cultural variables in the problem-identification stage could potentially result in the inaccurate identification of a problem, which could lead to an ineffective intervention.

The consideration of culture is not new. Individuals with Disabilities Education Act legislation has required teams to consider culture when working with children from diverse backgrounds.

Because culture, race, and ethnicity are considered sensitive topics by many, practitioners are often afraid to bring them up for fear they may be considered racist, because they feel uncomfortable discussing them, or because they lack the knowledge base to address or explore the issues in any depth. Culture should be considered as a factor in the same way gender, age, sex, single parent home, chronic illness, attention deficit disorder, etc., are considered in the assessment and development of interventions with children. If it does not contribute to the hypothesis of the child's problem, then it is discounted, but first it has to be considered.

SUMMARY

The population of the United States continues to be increasingly diverse. The challenge of school psychology is to prepare future school psychologists to practice in a culturally competent manner. This is particularly important given that only 5.5% of school psychologists in the field are people of color. It is essential that school psychologists learn to view each child in a cultural context with the goal of providing optimal services. In order to do this, school psychologists will need to become culturally competent. This involves developing a personal awareness, acquiring knowledge of other cultures, and applying the knowledge in skill-based practice. Being able to understand culture, as a continuum as well as understanding influences on culture, will, it is hoped, avoid stereotyping of groups. Effective cross-cultural practice relies on the practitioner's being able to both accept and respect human differences as well as the similarities. Little has been written in the literature to describe a systematic process or model for considering ethnicity and culture in the practice of school psychology. But, one model, the Ethnic Validity Model, shows promise as a framework for assisting school psychologists in conducting culturally relevant practice. An ecological perspective is also beneficial because it encourages the practitioner to view the child as an active participant in a system that is connected at all levels.

Becoming culturally competent is a process that will present some challenges but many more rewards. It is essential, however, if our goal is to provide effective services to an increasingly diverse student population.

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Gibbs, J. T., & Huang, L. H. (Eds.). (1998). *Children of color: Psychological interventions with culturally diverse youth.* San Francisco: Jossey-Bass.
A must read for practitioners working with a group of children that is culturally diverse. This book provides an up-to-date analysis and guide to the unique problems and special needs of minority youth experiencing psychological and behavioral problems. An ecological perspective is the common thread through all the chapters and in the case studies.

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A practical and enlightening book that answers some of the commonly asked questions about race and racism. It will help the reader move to a new understanding of what racism is, how it affects us, and provides suggestions for what can be done about it.

26 Best Practices in Collaborating With Parents of Children With Disabilities

Marian C. Fish
Queens College of the City University of New York

OVERVIEW

Over the last 30 years there has been a steady shift toward greater collaboration between school professionals and parents of children with disabilities. As a result of deinstitutionalization, legislative, advocacy, and political efforts, parent participation in the education of their children with disabilities has increased substantially (Fine & Nissenbaum, 2000; Simpson & Zurkowski, 2000). This change in parent-professional relationships has influenced how school psychologists work with parents of children with disabilities, necessitating increased knowledge and skills in developing collaborative relationships.

Prior to the 1970s, parent-professional relationships were frequently characterized by parent submission to professional judgment, and the professional was expected to determine what was best for the parents (Seligman & Darling, 1997). Parents were expected to follow the recommendations of professionals rather than to participate in decision making (Turnbull & Turnbull, 1997). Fine and Gardner (1994) remind us that parents were often blamed for their children's problems and were treated poorly. This phase of involvement may be described as one of "passivity on the part of the parent" (p.284) and dominance by professionals.

During the second phase of parent-professional relationships many advances were achieved through court rulings and legislation. As a result of political advocacy and greater interest by professionals in the rights of families, there was a shift in policy toward mandated parent participation in educational planning for children with disabilities in the legislation of the 1970s. Rights given to parents in P.L. 94-142, the Education for all Handicapped Children Act of 1975, for example, included required notice and consent for evaluation, participation in decisions regarding evaluation results and at Individualized Education Plans (IEP) conferences. While parent participation increased, and many professionals recognized the importance of family involvement, parents were not always prepared for active participation, and school policies often did not truly encourage parent involvement. While improved, the model of help giving still fostered dependency of parents on professionals and was child centered.

The ideological shift that has brought us to the current phase of parent-professional relationships results from the acknowledgement that parents are usually the most consistent and caring people in the lives of their children (Roberts, Wasik, Casto, & Ramey, 1991), that parents have the right to participate in the development of programs for children, and that parents and families have strengths, resources, and expertise that can and should be used to meet the needs of their children (Fine & Gardner, 1994). This perspective was first seen in the Part H requirements of P.L. 99-457 (l986). This extended P.L. 94-142 to children below age five and required services to be directed at *families* through the Individualized Family Service Plan (IFSP), which includes a statement of family strengths as well as needs. This has been incorporated and extended in the latest reauthorization of the Individuals with Disabilities Education Act (IDEA).

The primary systems in the life of a child are the home and school, and the message of this legislation is that participation by each system and collaboration between these systems is necessary for the healthy development of the child.

School psychologists have always worked extensively with children with disabilities in special education and to varying degrees with their parents. Despite the clear benefits of cooperative involvement and collaboration, the active participation of parents of children with disabilities in the education process has not yet been fully realized (Fine & Nissenbaum, 2000). The "inclusion" movement, which supports placement of children with disabilities into the mainstream whenever possible, will likely further expand the need for the school psychologist to work with parents of children with disabilities in developing viable educational programs.

This chapter describes how school psychologists can effectively apply the philosophy of parent-professional collaboration in their work with children with disabilities. It recognizes that there is not one type of relationship between parents of children with disabilities and school psychologists. Clearly, the ultimate goal is to promote healthy family functioning and parent decision making and to empower parents through a collaborative relationship.

BASIC CONSIDERATIONS

The presence of a child with a disability in a family is a contributor to family stress and chronic in nature (Seligman & Darling, 1997). As many have noted (e.g., Fine & Nissenbaum, 2000), however, stress does not necessarily lead to dysfunction, but rather "a family is dysfunctional if it is unable to organize itself over time to cope with stressful events (p.4)."

When there is a child with a disability in the family, there is an impact on family functioning (Turnbull & Turnbull, 1997). "...children with disabilities inevitably challenge families by making inordinate demands on their time, psychological well-being, relationships, economic resources and freedom of movement (Brantlinger, 1991, p.250)." Until recently, much of the discussion on parents of children with disabilities has assumed homogeneity of family response, suggesting that all families respond in the same way (Seligman & Darling, 1997). While there are many similarities in functioning in families with a child with a disability, adaptation of these families can vary greatly and is influenced by a number of factors including ethnic and cultural background, nature of the disability, family position in the life cycle, and family structure.

To collaborate successfully with parents of children with disabilities, it is important for school psychologists to be aware of both commonalities and differences in functioning of families with children with disabilities. It is not only necessary to consider how these families are alike, but also to consider variables that contribute to the uniqueness of each family. Also, school psychologists should be able to recognize adaptive coping responses: What does healthy adjustment look like in families with children with disabilities?

COMMON FAMILY EXPERIENCES

Childhood disabilities have economic and psychosocial consequences for most families.

Economic Realities

Expenses related to a child with a disability often result in financial hardship for families (Turnbull & Turnbull, 1997). Although medical insurance may reduce some of the expenses for medical care, therapy, child care, and special equipment, it rarely provides for all needs (Seligman & Darling, 1997). Transportation, laundry, or structural modifications for the home to accommodate a child (e.g., ramps) or to repair damage are often costly (Fish, 2000). There are also indirect costs for these families such as lost work time and interference with career advancement. A chance to relocate to another city might have to be rejected because needed child services are not available, and this may prevent a parent from moving upward in his or her employment. Funds may not be available to provide for higher education and/or other needs of siblings.

Costs may be high not only for children with severe disabilities, but also for those with mild and moderate disabilities. For example, a child with a learning disability might need tutoring, summer programs, or a special computer (Turnbull & Turnbull, 1997). The economic impact on families with disabled children can be quite significant.

Daily Care Needs

The physical and health needs of children with disabilities often require great effort, particularly when the disabilities are severe or the illnesses are chronic. Daily care includes bathing, dressing, toileting, and feeding the youngster as well as cooking, cleaning, washing, and taking care of the household. Going to the doctor, to the supermarket, or to a fast food outlet can be a major undertaking. Once the child is dressed, the child must be taken in and out of transportation (e.g., car, bus) and moved from place to place. As children get older, it becomes more difficult for parents to accomplish these tasks. The responsibility of daily care over many years is associated with increased parental stress (Turnbull & Turnbull, 1997). One parent describes a shopping trip with her daughter who is retarded:

> When Beckie was little, such an excursion required only the extra energy needed to carry her on my hip and choose groceries one handed.... But, when she hit her teens a completely new ingredient was added to the challenge. I took her shopping with me only if I felt up to looking groomed, cheerful, competent, and in command of any situation, so that when she bellowed and stamped as she did when we walked through the supermarket door, people who stared could quickly surmise that I would handle the situation, quiet my strange child, and get on with my shopping (Turnbull & Turnbull, 1985, p.144).

Socialization Needs and Recreational Opportunities

It has been well documented that parents who have a child with a disability are less frequently engaged in leisure time activities and interact socially less with friends (Fish, 2000). Parents express feelings of isolation and find it more difficult to go on family trips, out to dinner, or to the movies. The mother of a child with mental retardation and cerebral palsy said "...it's really like having a little baby only he doesn't outgrow it. And we don't as a rule have people over because he doesn't go to sleep." (Seligman & Darling, 1997, p.65). Frequently, social life is limited because of the difficulties in finding a babysitter or care-giver who often must be specially trained.

Negative attitudes of community members are often cited as a major barrier to socialization for the whole family (Turnbull & Turnbull, 1997). For example, when disabilities are very stigmatizing (e.g., severely impaired speech) parents often structure their lives to avoid social situations where the child would have to speak, limiting their social interaction as well (Darling, 1991).

Future Planning Considerations

A major issue that must be faced is planning for the child when the child is no longer eligible for mandated services (Seligman & Darling, 1997). "Most parents of disabled children have concerns about the future from the day they suspect that something is wrong with the child" (Darling, 1991, p.81). They often ask, what if something happens to us? Uncertainty about the future with regard to employment, social opportunities, and legal/financial needs is a common worry that affects how a family plans events.

Parent response

Several theories have been proposed to explain the response of parents when learning that their child has a disability: stage theory and nonsequential stage theory (Brantlinger, 1991: Seligman & Darling, 1997). Stage theory suggests that all families go through a sequential series of stages such as shock, denial, sadness, anger or anxiety, adaptation, and reorganization before generally reaching a final acceptance stage. Nonsequential stage theorists agree that these reactions may be present, but they do not necessarily occur in a set order, and they may recur at different points in the life cycle. More recent opinions suggest that families may have similar responses, but if and when families pass through stages is dependent on a number of factors including both status (e.g., family size) and interactional variables (e.g., situational contingencies) (Seligman & Darling, 1997). It is probably useful to anticipate that family members will go through some process, but that it will vary depending on the individual family (Fine & Nissenbaum, 2000).

VARIABLES AFFECTING FAMILY RESPONSE

All families share many characteristics, and all children present a host of challenges and responsibilities to their parents, yet there is great diversity in family response (Hanson & Hanline, 1990; Powers, 1991). Many variables impact on the adjustment of a family to a child with a disability including child characteristics, parent ability to cope with stressors in general, parental beliefs about the cause of the disability, types and availability of both formal and informal systems and networks of support (e.g., family, friends, professionals), physician attitude, and prognosis (Hanson & Hanline, 1990; Seligman & Darling, 1997). Also, family background including socioeconomic status, ethnicity, and religion help determine a family's perception of its situation, the roles family members will play, and the family response (Seligman & Darling, 1997). For the purposes of this chapter, these variables affecting family response have been combined and organized as follows: nature of disability, cultural background, the family system, and the family's position in the life cycle.

Nature of the Disability

The nature, severity, and demands of the disability play a critical role in family response (Turnbull & Turnbull, 1997). Each type of disability has distinctive characteristics and functional behaviors that impact on the family. For example, when a child has a language or speech disorder, everyday communication may be affected (Turnbull & Turnbull, 1997). In one study, 28% of parents of children with a wide variety of disabling conditions indicated that the disability impacted on the daily lives of the family. The effect was "clearly more pronounced among the families of children with more substantial handicaps and rises to 60% for families of children with physical/multiple impairment" (Palfrey, Walker, Butler, & Singer, 1989, p.102).

The physical appearance of the child with a disability can influence family reaction. A very visible handicap may affect not only the child's self-concept, but also the attitudes of parents, siblings, and others in the community. Severe disabilities that are more visible may excuse inappropriate behavior or may cause social stigma (Turnbull & Turnbull, 1997). It is not clear, however, that parents always share a common view of severity of handicap (Blacher, 1984). Ambiguous conditions such as autism or those with uncertain prognoses are hypothesized to be the most emotionally stressful for families as parents often keep searching for plausible diagnoses or appropriate treatment (Brantlinger, 1991). Genetic disorders have broad implications because parents may be carriers of the trait (Brantlinger, 1991). A thorough understanding of parental feelings about the handicap and of family expectations for the child is essential.

Of course, a most critical aspect of the disability is the functional behavior of the child. It is not the disability itself that is the key, but the resulting behavioral characteristics that affect the family.

Cultural Background

Culture permeates all aspects of family life including childrearing practices, beliefs about education and disability, and even how the family accesses health care (Correa & Jones, 2000). There is great diversity of reaction to childhood disability dependent on cultural groups such as social class, ethnicity, and religion. There is, however, considerable confounding in studies of ethnic groups, religious groups, and social class.

SOCIAL CLASS

The clearest examples of social class differences have occurred in studies with children within the mild ranges of retardation. Parents and professionals from middle- and upper-class families regarded even mild retardation as devastating, "while lower-class parents may not even define it as a disability (Seligman & Darling, 1997, p.174)." Possible explanations suggest that lower-class families are not as achievement oriented and are able to envision their child in normal adult roles, or that they have a higher tolerance for deviance. In the case of a physical disability, however, there appeared to be no differences by social class. A recent study reported that lower-class families had less family support and more physical, emotional, and financial problems than higher class families (Seligman & Darling, 1997). It is hypothesized that when necessities are scarce, the child's disability is only one of a myriad of problems and may not get the same attention as in more affluent families. Parents from different socioeconomic groups report stress differently and behave differently with regard to participating in program planning (Palfrey et al., 1989).

ETHNICITY AND RELIGION

Attitudes toward disability in our society vary by ethnicity and religion, yet we must be careful not to stereotype any group because there is much intragroup variability. Research on African-Americans, for example, indicates that they place great importance on the extended family and the church as social supports, and that they report a greater number of significant others who assist families with a disabled child (Seligman & Darling, 1997). Hispanic subcultures include Mexicans, Puerto Ricans, and subgroups from many Latin American countries. Traditional Mexican culture values of familism, male dominance, subordination of young to old, and person orientation rather than goal-orientation may result in Mexican-American parents being more accepting of disability than Anglo parents. Similarly, family strength and support is very important in the Puerto Rican community along with submissiveness and acceptance of fate; that is, such "fatalism may help parents cope with a child's disabilities" (Seligman & Darling, 1997, p.186). Another example where culture may play a role is among Asian-Americans. In Chinese culture, for example, family problems may be viewed as private, and sharing them with outsiders may be considered shameful (Seligman & Darling, 1997).

There is little evidence for a relationship between any religious group and acceptance of disability. It is suggested, however, that more religious families may have support networks through their place of worship (e.g., church, synagogue, mosque) that may facilitate acceptance and coping (Seligman & Darling, 1997).

It is clear that cultural background is a significant factor in family adjustment to a child with a disability and that it also affects family responsiveness and receptivity to sources of help (Fine & Gardner, 1994).

The Family System

Families are interdependent systems where change in any member affects all other members. Family structure refers to the characteristics of the family, its members, and its organization. Persons in the family (mother, father, siblings, grandparents) join in subsystems to perform various tasks or functions, and all members of the family have different roles and responsibilities (Fish & Jain, 1988; Powers, 1991). Family structure should be taken into account when considering family response to a child with a disability.

NONTRADITIONAL FAMILIES

An increasing number of children with disabilities are being raised in nontraditional households, such as single-parent, blended, or gay and lesbian parent homes (Fish, 2000). An overwhelming majority of single parents, 90%, are mothers who work outside the home (Carlson, 1995). While the functions of the single-parent family are the same as the two-parent family, when the custodial parent tries to carry out both functions, role strain may result and affect the system (Fish, 2000). On the other hand, in blended families where one or both partners have been previously married, a major structural issue is the lack of clear role definition and clear boundaries. There are now more than two parents with potential conflict in such areas as visitation, life-style, and/or discipline (Fish, 2000).

Recently, there has been interest in gay and lesbian households. Because adoption is often difficult for same-sex couples, they are frequently willing to adopt children who are hard to place such as children with disabilities. Fear of social discrimination and less external support often isolates them to an even greater extent than heterosexual families with a child with a disability (Fish, 2000). These examples illustrate that alternative family structures must be carefully considered and play a critical role in adaptation when there is a child with a disability.

SIBLINGS

Some research suggests that siblings of children with disabilities may be prone to adjustment problems, while other literature indicates that nondisabled siblings may benefit by developing responsibility, competence, and independence (Mason, Kruse, Farabaugh, Gershberg, & Kohler, 2000). These inconsistent findings may be the result of differences in extent of care taking by sibling, restriction of sibling's social life, excessive time and attention paid to the child with the disability by parents, and the number and gender of children in the family (Seligman & Darling, 1997). Several studies suggest, for example, that older female siblings in small families may have more extensive care-taking responsibilities than other siblings. Generally, it is reasonable to say that siblings of children with disabilities may be considered at risk.

It is apparent that family subsystems (mother, father, parents, siblings), all affect and are affected by the child with a disability in the family and contribute to the uniqueness of each family's adjustment.

Life Cycle Position

Families progress through identifiable stages in their development (Carter & McGoldrick, 1989). Whether these are crises or transitions depend on the ability of a family to modify its structures to accommodate changing needs. There are educational and developmental milestones where parents must confront limitations and strengths of their child (Fine & Nissenbaum, 2000). A survey of the literature suggests that major stages for families with a child with a disability are at preschool age (3–5 years), school age (6–8 years), adolescence (12–14 years), and chronological adulthood (19–21 years) (Beavers, Hampson, Hulgus, & Beavers, 1986; Powers, 1991). For example, with a child with retarded development during the early years, there are issues concerning the child's physical health and safety, parent adjustment to a diagnosis, and readjustment of expectations (Powers, 1991). When the child with a disability reaches school age, parents may be forced to acknowledge their child's widening differences from other youngsters. For parents of children with retarded development the onset of puberty increases their awareness of differences between their child's physical appearance and the child's mental and social abilities (Wikler, 1981). The adolescent may have increased wishes for independence, and the child's emerging sexuality is evident. At a time when the nondisabled adolescent is entering independent adulthood, the adolescent with a disability is often still dependent on his or her family. Parents who anticipated increased freedom and independence in personal, professional, and family areas must readjust their expectations (Dane, 1993). In one study of development and transition, 30 parents of mentally retarded persons characterized their child's twenty-first birthday as the second most stressful of 10 predictable crises (Wikler, 1981).

ADAPTIVE COPING

Despite oft-repeated statements of greater chronic dysfunction in families of children with disabilities, there is little evidence that supports the presence of greater psychopathology among these families (Hampson, Hulgus, Beavers, & Beavers, 1988). Although some families adapt to the stress of a child with a disability better than others, most families manage to adapt quite well to the needs of a child with a disability.

In a study of families with a retarded child, for example, observed family competence was within the adequate range and compared favorably to the nonclinical group of families (Hampson et al., 1988). Characteristics that were associated with healthy adaptation included: openness and directness of communication, strong internal support systems, a noticeable degree of autonomy and responsibility in all members, and few signs of unresolved conflict. Expression of feelings did not necessarily have to be positive, but could be negative or ambivalent and still indicate good coping.

In another study, family adaptation was promoted by clear diagnosis and information about the disability and the capability for positive contact with and response to other family members (Beavers et al., 1986). Families that acknowledged the extra needs and the "differentness" of the disabled member, while giving other family members' needs and views equal weight, were most competent. In these families there was an effort made to balance the special needs of the child with the disability with other family concerns (Beavers et al., 1986). Still other studies have reported that adequate social supports, and financial and personal resources such as family integration, parental self-esteem, and physical and emotional health, were associated with fewer negative consequences (Todis & Singer, 1991). Morgan (1988) reports that family cohesion, expression, and recreational orientation, as well as the mother's perception of adequacy of support from the husband and other relatives, were associated with better adaptation to an autistic child.

In general, certain family characteristics appear to be associated with healthy adjustment. These include good communication among the family members, supportiveness of family members toward each other, problem-solving skills, and the ability to assume appropriate parent and child roles (Fine & Gardner, 1994).

BACKGROUND AND TRAINING

Collaborating successfully with parents of children with disabilities requires that school psychologists move from a child-centered model to a family-centered model. A family orientation in school psychology is not synonymous with family therapy, but rather refers to consideration of the child within the family context and views the family as a system of interacting members.

A family-centered model recognizes that families have strengths and supports, and it appreciates their diversity and uniqueness. An understanding of similarities and differences among families and recognition of adaptive functioning as discussed above is essential. A knowledge base in family systems is required as all members of a family influence and are influenced by other members. Any change or stress in the family, such as the presence of a child with a disability, has an impact on the family system. The family is a dynamic entity and should be approached in a manner that recognizes the developmental and cyclical nature of adaptation (Bailey & Simeonsson, 1988).

A family orientation does not subscribe to a deficit model, but rather it builds on existing family competencies and helps develop new competencies so that a family can actively advocate for itself.

In addition to a family-centered systemic perspective, knowledge on the part of the school psychologist about the contemporary family; the cultural/ethnic background of families within their school district including their values, traditions, beliefs, and view of health care; relevant community resources; and the specific disability and the behavioral aspects of the disability is helpful when working with families with a child with a disability.

Without question, the school psychologist must also be very much aware of one's own attitudes and beliefs. Insight into one's own cultural values and preconceptions and assumptions about the family are prerequisite to understanding and respecting others' values.

Training in consultation skills will facilitate interactions with parents and the development of a collaborative relationship. Fine and Gardner (1994) note five "process skills" that support the enactment of collaboration: (a) interpersonal skills (e.g., accurate listening and communicating, (b) language considerations (e.g., "we" rather than "I" statements, respect for others views), (c) problem-solving skills, (d) recognition of family prerogatives, and (e) ability to personalize assessment (e.g., assess families with regard to structure, function, strengths, and resources) (p.299).

Table 1 illustrates the types of helping behaviors likely to be enabling and have positive consequences (Dunst & Paget, 1991, p.36).

It is also important for the school psychologist to be able to identify potential obstacles to a parent-professional relationship and have the skills to overcome them. Fish (1990) describes barriers to family-school relationships that may stem from philosophical, attitudinal, or logistical factors and/or skill deficits on the part of those involved. Similarly, Christenson and Hirsch (1998) identify conditions that may create conflict between the home and school. Sometimes the obstacles are bureaucratic and require organizational change, yet often the interference stems from lack of trust or poor communication. Weiss and Edwards (1992) have developed a series of exercises that help the professional learn how to take typical blaming statements, block the blame, and refocus a situation onto problem solving.

BEST PRACTICES

Traditional means of working with parents of children with disabilities have often been paternalistic and have led to dependency on the professionals. Despite pleas for family involvement, there has often been a disparity between the approach to helping, which views the school psychologist as being the authority with all the answers and the behaviors necessary to promote greater participation on the part of the family (Dunst & Paget, 1991).

A number of models have been proposed for working with parents of children with disabilities that have attempted to address this conflict. The model developed by Dunst et al. (1992), for example, sees parent-professional partnerships as a function of interactive time between parents and professionals and the display of different behavioral states and traits such as trust, honesty, and shared responsibility (p.170). This model shows how relationships evolve from coordination to cooperation to collaboration and finally to

Table 1. Help giver attitudes, beliefs, and behaviors associated with empowering and competency-producing influences

Prehelping attitudes and beliefs	*Helping behaviors*	*Posthelping responses and consequences*
1. Positive attributions toward help seekers and helping relationships.	1. Employs active and reflective listening skills.	1. Accepts and supports help seeker decisions.
2. Emphasis on help seeker responsibility for meeting needs and solving problems.	2. Helps client clarify concerns and needs.	2. Minimizes the help seeker's sense of indebtedness.
3. High expectations regarding the capacity of help seekers to become competent.	3. Pro-offers help in response to help seeker needs.	3. Permits reciprocity as part of help giver–help seeker exchanges.
4. Emphasis upon building on help seeker strengths.	4. Offers help that is normative	4. Minimizes the psychological response costs of accepting help.
5. Proactive stance toward helping relationships.	5. Offers help that is congruent and matches the help seeker's appraisal of needs.	5. Enhances a sense of self-efficacy regarding active involvement in meeting needs.
6. Promotion emphasis as the focus of giving help.	6. Promotes acquisition of competencies to meet needs, solve problems, and achieve aspirations.	6. Maintains confidentiality at all times; shares information only with help seeker's permission.
	7. Employs partnerships and parent-professional collaboration as the mechanisms for meeting needs.	
	8. Allows locus of decision making to rest with the help seeker.	

Note: From "Parent-professional partnerships and family empowerment" by C. J. Dunst and K. D. Paget, 1991, p. 36. In M. J. Fine (Ed.), *Collaboration with parents of exceptional children.* Brandon, VT: Clinical Psychology Publishing. Copyright 1991 by Clinical Psychology Publishing. Reprinted by permission of the publisher.

a partnership "as parents and professionals work toward agreed upon goals" (p.169). Reaching a true partnership relationship is a process that takes time. Table 2 (Dunst et al., 1992, p.163) presents a categorization scheme for organizing the major characteristics of parent-professional partnerships as identified by *both* parents and professionals. These characteristics can be used by professionals as guidelines to evaluate their own performance with regard to attitudes, beliefs, and behaviors.

A collaborative model of parent involvement is presented by Fine and Nissenbaum (2000). Its objectives are (a) to include parents in decision making; (b) to educate parents for participation in decision making; (c) to assist parents therapeutically, as needed, so they can cope with specific impediments to their participation; and (d) to enable and empower parents to work actively on behalf of their child. As with the parent-professional partnership model of Dunst et al. (1992), collaboration is a desirable goal that takes time to achieve. Laborde and Seligman (1991) propose a model of intervention for working with families of children with disabilities that has three counseling interventions: educative, personal advocacy, and facilitative counseling (p.161). The educative role is one of providing information to parents, and personal advocacy refers to assisting parents in finding relevant information and locating appropriate services but being careful to help parents assume this role themselves. Facilitative counseling is similar to supportive counseling or psychotherapy to help parents deal with feelings or behaviors of concern and to build coping behaviors.

A review of these and other models suggests that there is considerable agreement as to what effective relationships between school psychologists and parents look like and much consensus on the means to achieve these goals. Best practice in working with parents of children with disabilities has as its goal collaboration and/or partnership with parents using approaches that empower, encourage participatory involvement, and enhance competency (Dunst et al.,

Table 2. A categorization scheme for organizing the major characteristics of parent–professional partnerships

Category	*Definition*	*Characteristics*
Beliefs	Cognitive attributions about how one should act or ought to behave toward other people	Trust, mutual respect, honesty, acceptance mutually supportive, nonjudgmental, presumed capabilities
Attitudes	Particular (emotional) feelings about a person, situation, or relationship	Caring, understanding, commitment, empathy, positive stance, humor, confidence
Communicative style	Methods and approaches for information sharing between partners	Open communication, active listening, openness, understanding, full disclosure of information, information sharing
Behavioral actions	Behaviors that reflect translation of attitudes and beliefs into actions	Mutual respect, openness, flexibility, understanding, shared responsibility, mutual support, reciprocity, mutual agreement about goals, dependability, equality, humor, problem solving

Note: From Dunst, C. J., Johanson, C., Rounds, T., Trivette, C. M., & Hamby. D. (1992). Characteristics of parent–professional partnerships. In S. K. Christenson & J. C. Conoley (Eds.), *Home-school collaboration: Enhancing children's academic and social competence* (p. 163). Silver Spring, MD: National Association of School Psychologists. Copyright 1992 by the National Association of School Psychologists. Reprinted by permission of the publisher.

1992). One family describes a successful collaboration with a professional:

> The most important aspect ... was that he involved us as equals in the decision-making process.... By involving us in the process and by giving us his professional opinion as an opinion, he returned to us our parental rights of making the important decision that would affect our child's life. We were in control, but were no longer alone (Seligman & Darling,1997, p. 217).

Professionals move in and out of the life of the child, but parents provide constant support for their children and hold ultimate responsibility for their well being.

Best practice in working with parents of children with disabilities include the following services:

Education/Information Sharing

The role of providing information means that school psychologists help parents obtain information, understand and interpret information, or use information to help make decisions. The types of information can include behaviors associated with the disability, characteristic patterns of development, health or related services, and community resources. Care must be taken to assure that siblings and/or other family members are informed during this process as well.

Information needs will vary at different age periods. For example, diagnostic and prognostic information is generally conveyed at earlier ages (Seligman & Darling, 1997). On the other hand, information on sex management and sources of vocational training is more likely to be requested during adolescence. Other information needs are quite consistent across ages and include inquiries about respite services, financial assistance, support groups, and appropriate child care providers. At all ages parents may want practical information regarding management, specialized equipment, or legal rights that may be provided through books and other reading materials, referrals to community organizations, as well as direction to online resources. A list of 60 books written by parents of children with many different disabilities has been prepared by Mullins (1987) and is a useful resource. *The National Information Center for Children and Youth with Disabilities* (NICHCY, P.O. Box 1492, Washington, DC 20013-1492; www.kidsource.com/NICHCY) is a national information and referral clearinghouse and provides material for parents and professionals. Also, the *Federation for Children with Special Needs* (FCSN, 1135 Tremont St. Boston, MA 02120; www.fcsn.org) is a coalition of parent groups representing children with a variety of disabilities and working on behalf of their families. Other online resources are available as well.

Because information may come from many sources, Powers (1991) sees one role of the school psychologist as facilitating and coordinating service access. As a liaison to medical, educational, social, and financial services, the school psychologist can slowly transfer this knowledge of services to the family. One father's plea for such a coordinator is seen here:

> ... it seems that ever since Joan was born, everything has changed ... there always seem to be at least three experts around giving Judy advice on how to handle Joan.... I know that my son Jimmy has been having some problems, but the thought of another expert ... is more than I can take. I wish we could find one person who could pull all the information together (Family Life, 1985, p.50).

Once all the information is gathered, parents may choose to collaborate with the school psychologist in decision making. An essential aspect of this collaboration is that parents be given options whenever they exist so that they can make educated decisions on behalf of their child.

A problem-solving approach involving problem identification and analysis, brainstorming alternatives, and choosing a plan of action not only is a collaborative process but also models the problem-solving procedure for families. One family member pleased by a collaboration said of the professionals:

> ... They gave us ideas to get him into the setting. They never took control out of our hands, and we always did the steps ourselves. They were there as a resource and support. The staff helped me to gel the vision (Seligman & Darling, 1997, p. 218).

Helping to assure an appropriate match between family needs and service opportunities is a critical responsibility of the school psychologist. Providing services that are congruent with the needs of family may mean problem-solving with parents on the phone rather than in person so they don't miss work. Care must be taken not to overburden families, but rather to reinforce their decision-making abilities.

Advocacy

Advocacy "refers to the process of aiding parents to actively and purposively work for their own and their child's welfare by obtaining the support and services they need" (Laborde & Seligman, 1991, p.361). This may involve overcoming physical barriers (e.g., stairs), cultural barriers (e.g., prejudice), or social barriers (e.g., needed services) (Seligman & Darling, 1997). The school psychologist has the requisite knowledge about how agencies operate and how referral services work as was seen in the education role described above. Powers (1991) suggests that the school psychologist move from being a direct advocate for the child and family to being a consultant to parents in the advocacy process. Once again this means a relinquishing of authority on the part of the school psychologist and supporting the family as it asserts itself.

Support

Social support has been identified repeatedly as a key component in healthy family adaptation and coping. Support networks can be formal, such as organized groups run by the Arc (organization on mental retardation) or the local school, or informal such as family, extended family, and friends. Often families have resources other than the schools and its activities available to them. For example, the place of worship may be a nurturing environment for its members. Maintaining existing social networks and developing new social networks help reduce the social isolation and stresses of the family with a child with a disability. Turnbull and Turnbull (1997) provide a list of statewide parent-to-parent programs, parent training and information centers, and grassroots organizations. Of particular importance in all cases is to consider not only support for mothers but also support for fathers and siblings.

Facilitation of Healthy Family Functioning

Promoting healthy family functioning requires school psychologists to support the structural balance within the family including clear boundaries between parental and child subsystems, the executive function of the parental subsystem, and a healthy relationship between the parents (Powers, 1991). It is important to acknowledge the extra needs and differences of the child with the disability but without neglecting other family members. Remember, parents have needs beyond those of educating their children. Family competencies and resources can be assessed informally or through the use of specific assessment measures such as those described by Bailey and Simeonsson (1988). Noncustodial parents should be included in decision making when appropriate, and information should be sent to all involved adults.

Parents must determine if they want help and what kinds of help they need. Some ways to assist families might include helping them to minimize or better manage time demands and/or to encourage parents to maintain their own health through such means as exercise or vacations. Another suggestion is to hold informal family meetings weekly to review household responsibilities and to discuss concerns.

Individualization of Services

In all cases the relationship between the school psychologist and the parents is an individualized one taking into consideration racial, ethnic, cultural, and socioeconomic diversity as well as the nature of the disability, family structure, and life cycle position. For example, early childhood consultation regarding young children with disabilities is qualitatively different from consultation when children are in elementary and secondary school settings (Mowder, 1994). These younger children are developmentally more dependent on parents and families for their care and protection (Mowder, 1994). Parents should never be expected to function in only one way, and school psychologists must match services to need.

Group Approaches

There are a number of reasons why group approaches are well suited for parents of children with disabilities (Fish, 1998; Gettinger & Guetschow, 1998). Groups bring together parents with similar experiences and can be effective in meeting parental needs for information, social and emotional support, encouragement, and assistance in problem solving (Gettinger & Guetschow, 1998). By participating in a group parents may develop more realistic expectations about their child, may become more self-confident, and may be empowered to make more effective decisions. Parents offer a wide array of coping behaviors from which other members learn (Fish, 1998). Also, feelings of social isolation are minimized through group work.

Groups for parents with a child with a disability may serve educative/training and/or therapeutic functions (Fish, 1998). The common core elements of parent groups are peer support, vicarious learning, mutual helping, reality testing, and the fostering of friendships (Gettinger & Guetschow, 1998). There is growing recognition that support is needed not only by the mother of a child with a disability but also by other family members, especially fathers. Siblings and grandparents may be the focus of support groups as well (Fish, 1998).

Other Best Practices

Best practices in working with all parents should be applied to families with disabilities as well. Some examples include avoidance of jargon, flexible scheduling, addressing correspondence to both mother and father, considering siblings, and establishing a relationship before there is a crisis (e.g., Fish, 1990). Parent-teacher contacts will likely increase as a result of including more children with disabilities in mainstream classes. School psychologists can assist teachers and other school personnel in acquiring skills important for successful collaborative relationships with parents.

SUMMARY

This chapter has identified a number of common experiences among families with children with disabilities. These are economic constraints, daily care needs, socialization needs, and worries about the future. Though these families share many concerns, each family is unique, and a number of variables impact on their adjustment including the nature of the disability, the cultural background, the family structure, and the family's position in the life cycle. Adaptive functioning in families with children with disabilities is associated with good communication, strong support networks, and clear boundaries between subsystems.

Collaborating successfully with parents requires school psychologists to adopt a family-centered approach to services. This is reflected in a non-blaming perspective where family strengths and resources are recognized and supported and different methods of coping are respected. The goal is one of collaboration with parents to enable and empower them so that they may help themselves. This involves the development of trust, respect, mutual commitment, and sharing. Empowerment of parents is facilitated by the school psychologist through information sharing, advocacy, support, promoting healthy family functioning, and through individualization of service to each family. Collaboration can be through group work as well. In all of these roles the school psychologist aims to increase parental involvement so that the parents assume the role of decision makers for the family.

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Fine, M. J., & Simpson, R. L. (Eds.). (2000). *Collaboration with parents and families of children and youth with exceptionalities* (2nd ed.). Austin, TX: PRO-ED.

This book views parents as partners with the professional community in the care, treatment, and education of their child with a disability. It has as its theme the empowerment of parents through a collaborative relationship with professionals. The book presents a collaborative-empowerment model, provides educational and intervention considerations, examines the impact of different exceptionalities on the family, and discusses issues including sexuality, transitions, and advocacy.

Seligman, M., & Darling, R. B. (1997). *Ordinary families, special children: A systems approach to childhood disability* (2nd ed.). New York: Guilford.

This book examines the child, family, ecological, and sociocultural variables that contribute to the response of families to childhood disability. Writing from a systems perspective, the authors discuss the impact of a child with a disability on the family from birth through adulthood. Information on intervention strategies and services for families is provided.

Turnbull, A. P., & Turnbull, H. R. (1997). *Families, professionals, and exceptionality: A special partnership* (3rd ed.). Columbus, OH: Merrill.

The theme of this book is empowerment of parents through collaboration. By using a family systems perspective, the authors provide both theoretical and practical information and infuse multicultural issues into the text. Parent perspectives are clearly provided.

WEBSITES

www.kidsource.com/NICHCY

The National Information Center for Children and Youth with Disabilities (NICHCY, P.O. Box 1492, Washington, DC 20013-1492) is a national information and referral clearinghouse and provides material for parents and professionals.

www.fcsn.org:

The Federation for Children with Special Needs (FCSN, 1135 Tremont St. Boston, MA 02120) is a coalition of parent groups representing children with a variety of disabilities and working on behalf of their families.

27 Best Practices in Facilitating Meaningful Family Involvement in Educational Decision Making

Dawn D. Hubbard
Northeast Kansas Education Service Center, Lecompton, Kansas
Jane Adams
Keys for Networking, Topeka, Kansas

OVERVIEW

"The way schools care about children is reflected in the way schools care about the children's families" (Epstein, 1995, p. 701). Schools need families as much as families need schools. Schools especially need families when children are not adequately progressing in the general education curriculum. A problem-solving approach for how school-based teams respond to academic and behavior concerns can meaningfully involve families at every step of the process. With the problem-solving approach used across the continuum of difficulties and with continuity of team members across the decision-making process, families and teachers can stay focused on the child and the child's needs.

Historically, including parents in meaningful ways has been very difficult for both educators and parents, especially when it involved special education decision making (Adams et al., 1998). With the categorical medical models that evolved through the 1970s, outside experts drove the special education process for parents and for schools. Because experts determined the methods of assessment and the procedures to obtain educational supports for individual students or teachers, lay people (classroom teachers and parents) simply abdicated their responsibility. The 1990s brought new emphasis on comprehensive school reform and school-based decision-making, and parents, as well as teachers, now have new roles. Previously, family involvement consisted to a school expert explaining the eligibility process and criteria of the family. Now, best practices in family involvement utilize a school-based problem-solving team that includes parents to assess strengths and to formulate and evaluate interventions and to collectively make decisions (this is depicted in Table 1).

This chapter identifies new strategies for reconceptualizing family involvement based on a school-based team-centered planning model. Described are the essential elements including composing a school-based team, using strengths-based problem solving, using joining language, sharing decision making, and connecting families to individual teams, to other parents, and to the school. This chapter then concludes with best practice examples that demonstrate the efficacy of the model.

Changes in Evaluation and Service Delivery Models

The challenges faced by parents and educators in classrooms of the twenty-first century exceed in complexity what the traditional expert-driven assessment process offers. The prevailing model of the past century provided categorical assistance to children failing to make adequate academic or social progress. Figure 1 depicts a local education agency's categori-

Table 1. Family involvement continuum

Expert-driven	*Family-allied*	*Family-centered*	*Team-centered*
The traditional model of involvement considers the professional to be the expert and views family members as recipients of information. The professional-parent partnership is typically uncomfortable and business-like. Parents may be viewed as adversarial if they ask questions or have conflicting opinions. They are rarely asked for input.	This attitude views families as allies of services. The caregiver is seen as a more equal colleague, one who has expertise, knowledge, and choice. School professionals and family caregivers work together to address mutually agreed upon goals. The family depends on the advice of professional staff who directs the family's interactions with the child.	This philosophy puts school professionals "one down" to family caregivers in the child's team. School professionals believe family caregivers know what is best for their child. School professionals help the family achieve family goals for the child. School team members ask, "How can we help you? How can we be of service to you? What do you need from us?" Decisions and the responsibility rest with the family.	School-based practice centers decision making with the building team. Team strengths (which include the family and the child) are used to select interventions most likely to work. The team-centered problem-solving model depends on the combined skills and resources of the team. Responsibility for decisions rests with the collective power of the team's working together supporting each other as well as supporting the child and family.
1970s	*1980s*	*1990s*	*2000*

Adapted from Adams, Biss, Burrell-Mohammad, Meyers, & Slaton (1998).

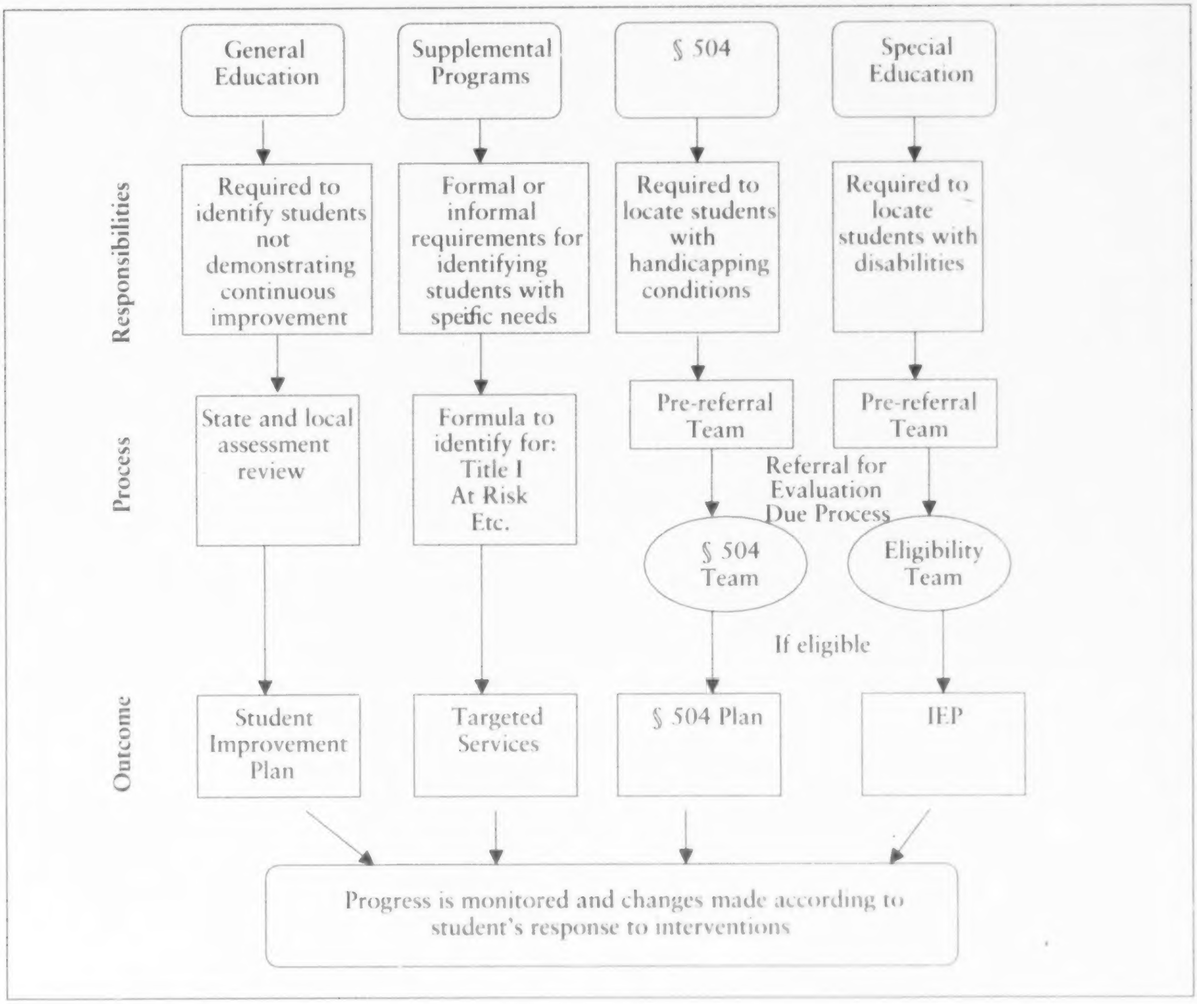
cal compensatory, supplemental, and special education responsibilities, procedures, and outcomes. Local education agencies, through many state accreditation requirements, have the responsibility of ensuring that students demonstrate continuous academic and social improvement. Classroom teachers must design, implement, and monitor instructional strategies when students fail to demonstrate adequate progress according to performance on state or local assessments. When student problems are more severe than classroom teachers can resolve, districts offer program supplements to the general education curriculum. This array of programs may be federal or state funded, optional or mandatory, such as Title I, after school and Saturday tutoring activities, at-risk prevention programs, and the range of federally prescribed special education services.

Since the mid-1970s local education agencies have held the responsibility of locating and identifying students with disabilities. Both the Individuals with Disabilities Act (1997), and Section 504 of the Rehabilitation Act (1975) require school personnel to find children in need of services and supports and to include families in the decision-making process. With the 1970s reliance on outside experts to ensure that appropriate learning opportunities were provided, and the 1980s and 1990s caveats to decrease unnecessary referrals for special education, the outcome, though unintended, has been to remove ownership of the problem and its solutions from the school and, unfortunately, from parents.

Historically, when external experts have driven the process, classroom teachers and parents are omitted from finding solutions to problems. Both teachers and parents seem relegated to signing documents. When building staff waits for directions from external experts, fragmentation and inefficiency block the effective use of building resources and meaningful decision making by people who best know the student and each other. It delays meaningfully connecting the student to interventions and hinders teachers from connecting to parents and each other.

Figure 2 depicts how educational responsibilities can be addressed in a less fragmented manner with school-based problem-solving teams supporting access to individualized student interventions for any student (Kansas State Department of Education, 1999). The school-based team approach engages and empowers those who work with students daily and develops their capacity to deliver what students need. The focus becomes "what does it take to make this student and this teacher successful together." While helping individual students, this approach also builds the school's capacity to connect teachers, family, and community resources to each other. If the school team suspects the student is a student with a disability on

Figure 1. Fragmented categorical systemic responsibilities, responses, and outcomes

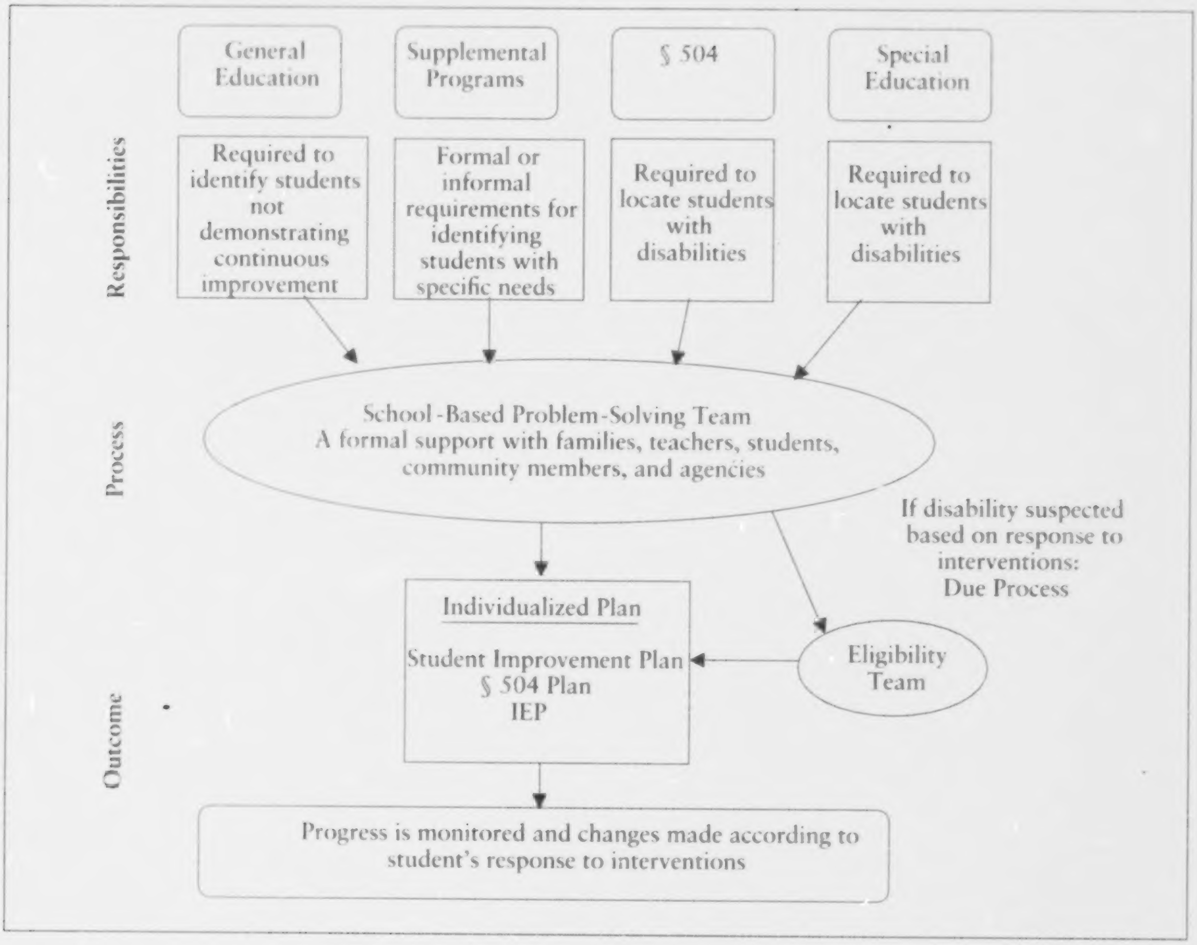

Responsibilities
Process
Outcome
General Education
Supplemental Programs
§ 504
Special Education
Required to identify students not demonstrating continuous improvement
Formal or informal requirements for identifying students with speific needs
Required to locate students with handicapping conditions
Required to locate students with disabilities
State and local assessment review
Formula to identify for: Title I At Risk Etc.
Pre-referral Team
Pre-referral Team
Referral for Evaluation Due Process
§ 504 Team
Eligibility Team
If eligible
Student Improvement Plan
Targeted Services
§ 504 Plan
IEP
Progress is monitored and changes made according to student's response to interventions

the basis of the child's response to the interventions, then the relevant team members and necessary experts join to form an eligibility team. The student performance data previously collected are shared so that further assessment is non-duplicative. The team focuses on functional and meaningful assessments to guide confident decision making.

Team-Centered Approach and a Problem-Solving Model

With systematic problem solving, the school teams, which include parents, collect and analyze data to develop, implement, and monitor interventions for their effectiveness (Tilly, this issue). The problem-solving approach is constant, whether used by a team, which is composed of the classroom teacher and parent, or an extended school-based problem-solving team of six to eight people. Keeping the problem-solving concept constant allows access to varying levels of resources, depending on the presenting concern as depicted in Figure 3 (Heartland Area Education Agency, 1994; Reschly & Ysseldyke, 1995). A small team often successfully carries out problem solving, as indicated by the size of the first circle. For example, the classroom teacher and the parent meet to discuss a concern the parent or the teacher has about a child's reading performance. Together they discuss

Figure 2. Seamless system using a problem-solving process

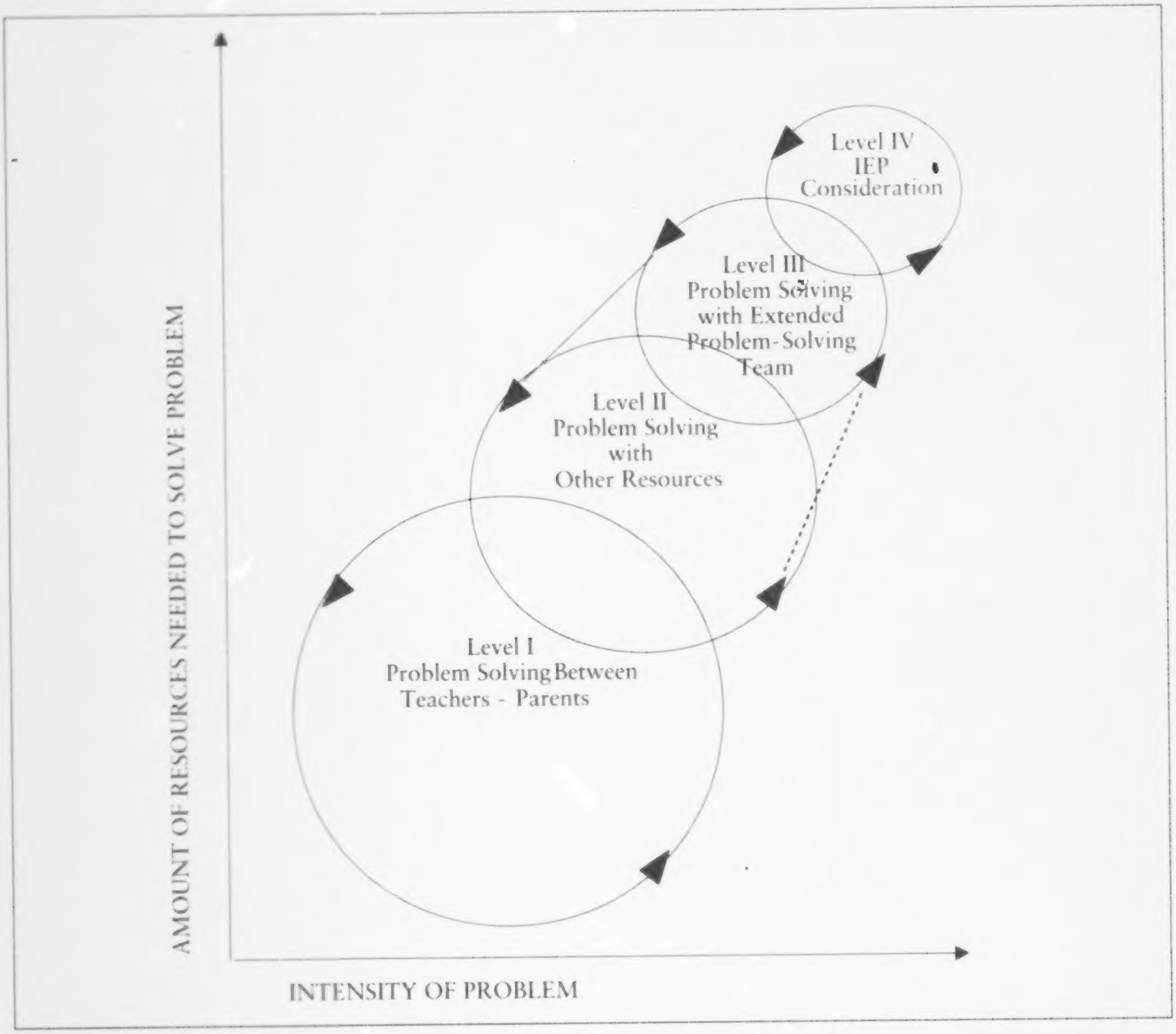

General Education
Supplemental Programs
§ 504
Special Education
Responsibilities
Required to identify students not demonstrating continuous improvement
Formal or informal requirements for identifying students with specific needs
Required to locate students with disabilities
Required to locate students with disabilities
Process
School-Based Problem-Solving Team
A formal support with families, teachers, students, community members, and agencies
If disability suspected based on response to interventions: Due Process
Outcome
Individualized Plan
Student Improvement Plan
§ 504 Plan
IEP
Eligibility Team
Progress is monitored and changes made according to student's response to interventions

their observations, consider the teacher's classroom data, and propose an intervention. The intervention plan may be as simple as sending supplemental reading materials home for an adult to use with the child. It may have the child read with an older student at school. If the intervention works, then no further problem-solving efforts are needed. When the intensity of the concern exceeds classroom and home resources, or when the student, parent, or teacher asks for more extensive assistance, the parent-teacher team adds members who have varying levels of expertise and experience. If the school team suspects the student may be a student with a disability, then the team may invite necessary experts, such as the school psychologist or behavior specialist, to continue problem-solving efforts as part of the initial evaluation process. The continuity of team members is critical for teachers, and especially for families. For families, the more team members remain constant and represent the people who serve the children daily at the school, the more parents trust the process. The more trust they have in the process, the more parents will participate.

BASIC CONSIDERATIONS

School-based teaming invites and engages families as meaningful participants. By using lay language and enlisting the strengths of individual team members to propose interventions facilitates understanding and defines outcomes so that the success or failure of the interventions becomes clear.

Figure 3. Systemic use of a problem-solving process


Level IV
IEP
Consideration
Level III
Problem Solving
with Extended
Problem-Solving
Team
Level II
Problem Solving
with
Other Resources
Level I
Problem Solving Between
Teachers - Parents
AMOUNT OF RESOURCES NEEDED TO SOLVE PROBLEM
INTENSITY OF PROBLEM

Adapted from Heartland Area Education Agency (1994).

Design and Explanation of Process

Each school-based team determines how the school will make the process fair and accessible to students, families, and the community. In this model, school psychologists use their expertise to connect and coordinate multiple service systems (e.g., mental health, education, social services), develop and nurture the partnerships between the school and community agencies, and train teachers to work alongside parents.

In this role, the school psychologist can also assist to set policies that invite families that are, or are likely to become, customers of extensive supports. Developing policies and procedures with the people most affected assures those policies and procedures will work for them. For example, asking family members to review letters and brochures that explain the process to other parents will result in clear, easy-to-read descriptive language, understandable to the families the information is designed to reach. Furthermore, the school psychologist may suggest strategies to let families know how to access help and how to design interventions for their own child. Awareness activities may include talking with the local PTA, writing an article in the local or school newsletter, making brochures available in the community, and/or asking family advocacy organizations to disseminate the process. The school psychologist may recommend to the school team families that have been through the process to explain it to other families. Parent liaisons can talk effectively with other parents about what the process will look like, the importance of the parent's role on the team, and the value of information they bring to the team. Peer-to-peer consulting (parent-to-parent, teacher-to-teacher) increases the acceptance and involvement of all members. For example, if a teacher seeks assistance from the school team, then the teacher is likely to respond more favorably when working with another teacher than when working with a principal. Parents are more likely (especially parents who may have had less than a positive experience with school meetings) to listen to other parents, and are more likely to ask questions. Peer-to-peer discussions allow and even establish open and honest exchanges regarding fears associated with having a child experiencing academic and/or social difficulties in school. The school psychologist can define and support this process of parent-to-parent, teacher-to-teacher mentoring.

Designing Interventions Based on Strengths

With the teacher and the parent as core team members, strengths assessments engage the teacher, the families, and the student. It also connects the school staff to each other in new and more positive ways. Assessing the environment and people for their strengths has been widely adopted as successful in mental health-driven wraparound planning (Goldman, 1998; VanDenBerg & Grealish, 1996). In the strengths assessment, team members define together the *functional* strengths of each team member. With the school psychologist facilitating this process, team members point out positive aspects of each team member, and they look for what works for the teacher, the student, and for the parents. When team members make their strengths explicit during intervention planning, the team members can draw upon their own strengths to design and evaluate the potential of each intervention prepared. When interventions utilize strengths, the likelihood is increased that (a) the interventions will be successful and (b) they will be implemented by the student, family, and classroom teacher.

For example, when a school-based team considered the problems of a 5-year old student experiencing difficulty getting along with peers in the lunchroom, the mother shared her observations that Joshua's lunchroom behavior depended on the lunchroom supervisor. This information offered a new insight to the team. As team members recognized this mother's ability to offer insights and report her observation, they identified one of the mother's strengths as listening to her child and knowing the school environment through her child's eyes. The team, which included Joshua's mother, designed an intervention plan and had the mother monitor and chart Joshua's behavior. The school psychologist assisted in setting up the chart while the teacher agreed to visit with the principal about training for the lunchroom supervisor.

Capitalizing on each member's strengths increases participation, builds ownership of the process, and creates bonds between school and home and among team members. The team becomes accountable to its members based on the resources they bring.

Joining Through a Common Language

Attending to strengths of individuals and the use of positive interactive communication keeps both parents and teachers engaged in the problem-solving model. The school psychologist may help parents and the child's teachers reframe what they know about the child so that a powerful strengths-based plan is developed and confident educational decisions are made. Keeping the meeting free from jargon and holding conversations to strengths assures that each team member is comfortable and confident to ask questions and offer resources during the meeting. Teams should assign a team member the task of ensuring the focus on strengths and clarifying possible "jargon." The person who assumes this role asks for examples and clarifies issues during the meeting and assures the focus on strengths. The team should consider asking the student to serve as the "jargon buster." In this role, the student can have a dignified opportunity to ask for clarity, have an chance to talk, and is provided a structure for participation.

Holding conversations to strengths often involves reframing the information that is brought to the table. The school psychologist can teach the team to reframe problems in terms that allow them to design more powerful intervention plans. Interventions based on strengths of the team have an increased probability of succeeding (VanDenBerg & Grealish, 1996). For example, discussing the student's ability to share the details of his school day with his mother and to examine the school environments where he has success removes the jargon of categorical labels, placement terms, and diagnoses and focuses the discussion on what works and what is likely to work again. Parents, teachers, and students can participate because there is no jargon and the conversation is focused on solutions. When participation such as this is achieved, individual team members share a collective ownership for the decisions being made.

Team Decision Making

Avoiding the unintentional blaming and shaming at planning meetings shapes the forum for decision making and offers everyone affected by the interventions voice, access, and ownership of the process. Interventions based on strengths and data gathered by the team determine educational decisions. The fundamental difference in team decision making versus traditional expert eligibility determinations is the degree to which team members contribute to the decision-making process. At the most basic level, school-based teams define the concern, probe for strengths, determine what needs to be done, evaluate the success or failure of each intervention, and decide what comes next based on information they all share. The team maintains focus on the student and the teacher's response to intervention efforts, as opposed to focusing on deficits within the student and the teacher. The school psychologist can help families and classroom teachers share necessary information by establishing the tone and openness to the planning process, which uses the strengths of the people who must carry out and evaluate the interventions.

BEST PRACTICES IN AREA

Shifting the focus from a dual system of decision making to a unified system considerably changes the school climate. Instead of expending valuable time and energy documenting student failure in general education, waiting for testing, and hoping for a categorical placement, teams expend their time and energy designing strength-based interventions and using the resulting data to drive team decisions. In a unified system, teams use the existing talents of teachers, students, and families in new ways. The team shifts the focus from eligibility determination to planning and judging the effectiveness of the intervention implementation and does not judge the implementers or the student. Family involvement becomes actively contributing information and making decisions with other team members instead of signing consent to test or placement forms. School-based team-driven problem solving engages the members and includes the members in determining effective strategies that will adequately address academic and/or behavioral concerns for individual children and their classroom teachers. As depicted in Figure 2, the process serves to provide formal and informal supports for any child within the educational system who is experiencing academic or behavior difficulties. To accomplish this, teams need to focus on more than individual student plans. For example, many schools in Kansas use Student Improvement Teams to (a) address the needs of individual students, (b) develop partnerships with families and local organizations (e.g., local mental health centers, family organizations, social services, businesses, law enforcement), and (c) develop policy and staff development recommendations and connect team efforts with school-based accountability controls (e.g., systems of accreditation, compliance monitoring).

Preparing families and teachers for their contributions during early problem-solving efforts around an individual student facilitates meaningful teacher and family involvement. Table 2 provides general problem-solving guidelines along with questions that shape strengths-based discussions.

The team collects information by examining personal experiences of people involved, record reviews, test information, interviews, and observations (Heartland Area Educational Agency, 1994; Sattler, 1988). Preparation includes meeting with the family in an informal, small setting to get to know the family and to help the family identify their strengths (the parents and their child), areas of concern, related factors, and to define interventions that have worked before or in the family's opinion are likely to work again. The same must be done with each classroom teacher.

Table 2. **Decisions, questions, and potential family contributions**

Educational Decision Being Made: Problem-Solving Efforts Prior to an Initial Evaluation	
General problem-solving questions	**Questions to facilitate meaningful family contributions**
1. What are the functional strengths of the child, family, and school? 2. What are the areas of concern? 3. What are contributing causes of the concern related to curriculum, instruction, environment, and the learner? 4. What do we think is the most likely contributing cause, and what can be done to make things better? 5. How will we know it is working?	1. What are your child's strengths? What does your child do best? What is your child most proud of? 2. What are the strengths of your family? Think about each person in your family individually as well as things you do as a family. 3. What do you see as strengths of your child's teacher and school? 4. In what area(s) could your child use the most improvement? What things does your child seem to struggle with the most? 5. When you think about the things your child needs to inprove, what could be possible causes that we could change in order to make things better? Think about the following areas: • Curriculum: For example, the curriculum materials brought home are difficult for your child to read; there are not many practice items for your child to completely understand what is being taught. • Instruction: For example, your child tells you he gets lost when the whole class is learning something; your child does not understand the things the teacher is teaching. • Environment: For example, your child has difficulty studying when there is lots of noise around; your child has difficulty following classroom routines. • Learner: For example, your child lacks good study skills or is very disorganized; your child does not seem to notice that he is doing his homework incorrectly. 6. What are things you think would help address the areas your child has difficulty with? In what ways does your child appear to learn best? Are there any arrangements that seem to work best? Are there certain things that motivate your child to learn or to participate?
Educational Decision Being Made: Entitlement Determination	
Evaluation questions	**Questions to facilitate meaningful family contributions**
Entitlement Component 1: Evidence of resistance to reasonable general education intervention efforts	
1. What appears to be effective or not effective with this student? 2. What do the data tell us about where to go next?	1. What changes have you noticed since we began implementing interventions to improve your child's performance in (area of concern)? 2. What things appeared to help or not to help? 3. What are your ideas about what could be tried next?
Entitlement Component 2: Evidence of a severe discrepancy from peers' performance levels in the area(s) of concern.	
3. What is the magnitude of the presenting problem? Discrepancy evident across both sources and agents of information.	4. In what ways does your child's difficulty in (insert area of concern) affect your child's education and functioning at home or in the community? 5. Is this a new area of concern, or did you have concerns in this area with your child last year?
Entitlement Component 3: A data-based description of the resources necessary to improve and maintain the individual's rate of learning at an acceptable level.	
4. Given the presenting concern and response to past interventions, what needs to be done to enable the child to participate and progress in the general education curriculum?	6. Based on your best thinking at this moment, what things could be done to help your child in (insert area of concern)? 7. What things do you think could be done at home to help your child in (insert area of concern)? What support would you need in order to make this happen?

Table 2. *(continued)*

Entitlement Component 4: Convergent evidence logically and empirically supporting the teams' decisions	
5. Is this a child with a disability as defined by IDEA or § 504? 6. Does this child need specially designed instruction to benefit from education?	8. Given your understanding of what a child with a disability is, does the information discussed with the rest of the team members fit with what you are seeing with your child?
Educational Decision Being Made: Instructional Planning	
Additional questions	**Questions to facilitate meaningful family contributions**
1. What are the measurable annual goals for this student?	1. What do you see your child doing for himself or herself in 1 year? In 3 years? After high school? 2. At the end of this year, what is one thing you want your child to be able to do that the child is not doing right now? 3. Do you have any nightmares you want to avoid? 4. If the program we come up with works, then what would you expect to see your child doing in class?

Methodically examining the strengths and resources of the student, teacher, and family provides voice during problem-solving efforts. In the team-centered approach delineated in Table 1, families and school personnel ensure that the resources of the team are identified and used when selecting interventions that are based on their likelihood to succeed. Implementing the intervention plan requires the team to set action items with responsibilities, time lines, and expected outcomes delineated in the plan. The team monitors the student's progress and reconvenes to assess the integrity of implementation and the adequacy of the student's response. When evaluating the adequacy of student progress, team members gather perceptions of progress from the teacher, family, and student and then examine the data specified in the plan. After considering all data, the team determines whether the intervention plan should continue or be changed. If progress is not sufficient, then the interventions are modified. The team maintains its focus on solving the presenting problem. The team continually monitors to assure that the interventions fully utilize the learning/teaching strengths of the student and the teacher. When strengths-focused interventions fail to afford the student benefit from general education, or if the interventions are producing gains but require extremely high levels of support, the team may recommend an initial evaluation for special education.

Problem-Solving Efforts During an Initial Evaluation

When the school-based team initiates an initial evaluation, the team reconfigures to include those necessary to determine if the child is a child with a disability who needs special education. The end result is always the development of a plan to address the individualized needs of the child, regardless of the eligibility decision. The school psychologist's role is to help the extended team understand special education eligibility issues as they contribute to the evaluation and to participate in the eligibility decision. The school psychologist, to prepare families to be meaningful participants in eligibility decisions, must explain to the families the guiding criteria around which data will be collected. Table 2 includes questions to facilitate family and classroom teacher involvement during this process. The entitlement components described by Tilly, Reschly, and Grimes (1998) offer a structure for considering eligibility and need for special education. Basically, the components require the extended building team to use the data from their early problem-solving efforts when determining what additional information is needed to make eligibility judgments. During the special education eligibility meeting, all team members discuss data relevant to each of the eligibility components. The school psychologist assures that each team member is an active contributor in the discussion and facilitates the team's discussion to answer the questions of eligibility and need for special education services. Finally, building team members determine what needs to be done to enable the child to progress in the general education curriculum. With this model, the team building is poised to write the individualized plan for the child, even if the child is not found as eligible for special education. They retain ownership of the process and the plan.

Problem-Solving Efforts During Instructional Planning

With classroom teachers and families involved in every phase of educational decision making, instructional planning simply progresses. The school-based team writes an education plan for the student (i.e., Individualized Education Program, §504 Plan, or Student Improvement Plan) and sets measurable annual goals for the student. Team members review the initial evaluation information from a strengths perspective, determine present levels of educational performance, identify the resources needed to address the student's needs, and determine how progress will be monitored so the plan can be evaluated. Table 2 concludes with questions to assist family members and the team to determine annual goals.

SUMMARY

Several states have moved practices toward a functional and non-categorical identification process and service delivery model by using the problem-solving model as the foundation (Ysseldyke & Marson, 1998). Family involvement in a school's problem-solving process means that families are included as equal and integral members of the school team. As members of the school team, families participate in the design, implementation, and evaluation of services. School psychologists play an integral role in reconceptualizing strengths-based, data-driven assessment processes and family involvement. As outside experts, school psychologists can help schools shift the focus from a categorically driven model to one of team-centered and strength-based practices. Developing a team-centered approach allows the school psychologist to ensure families are at the table when the process is defined, are brought into the process early when a concern is noticed, and have a voice that is valued and honored as they contribute to the decisions made about their child.

When families are informed and provided with ways to be team members, they can meaningfully participate in educational decision making. When school-based teams become a way of doing business that values each member's contributions, seek an understanding of team strengths, and create a process in which educational decision making is truly about what is best for the child, we will realize the capacity that resides in each of our schools to care for its members.

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This collection offers a thought-provoking look at how the special education decision-making process is being changed to better serve children and families. The impressive collection of scholars contributing to this book brings a common focus on problem solving to each chapter. The book covers systemic issues, legal parameters, and non-categorical approaches for the range of disability areas and includes chapters on early childhood, transition, and low incidence populations. This book should be a must read for today's educator.

AUTHOR NOTES

We would like to thank Joanne Bregman, Tracey Oltmanns, and three anonymous reviewers for their comments on earlier drafts of this chapter.

28 Best Practices in Supporting Home-School Collaboration

Amy N. Esler, Yvonne Godber, and
Sandra L. Christenson
University of Minnesota

> *School-family partnerships are the mutual collaboration, support, and participation of parents and school staff at home or at the school site in activities and efforts that directly and positively affect the educational progress of children.*
>
> Moles and D'Angelo (1993, p. 214)

OVERVIEW

Over the past decade, a number of studies has added to our understanding of the benefits of home-school collaboration efforts, and specifically to how schools can reach out and partner with all families. Having captured the interest of numerous educators, educational researchers, and policy makers, many have begun to clarify not only the *outcomes* associated with families and schools working together to support student learning, but also the *processes* for encouraging effective, positive interactions between families and schools. This shared interest stems from the belief that to maximize the impact of prevention and intervention efforts, all contexts in which children develop need to be addressed. Home-school collaboration, which is defined as establishing and maintaining productive, working relationships between families and schools to facilitate children's learning, is one manifestation of the knowledge that children's academic and social growth occurs across multiple settings.

Current concerns for youth have prompted calls for increased family participation in education. As schools have begun opening their doors for more meaningful family participation, many of the more traditional family involvement practices have proved insufficient, and new and varied methods have been recommended. Although change is rarely easy, at the same time new opportunities for school psychologists and others interested in supporting students by enhancing the relationship between families and schools now exist. In this chapter, the historical and political context surrounding the vast, continuously growing home-school collaboration literature is briefly summarized before key features and barriers facing such collaborative efforts are presented. Next, a model depicting the critical processes necessary for enhancing connections between home and school reveals how attitudes, relationships, and actions influence the manner in which families and educators are able to collaborate successfully.

BACKGROUND

Whether called home-school collaboration, parent/family involvement, or family-school partnerships, the goal of promoting strong bonds between families and educators is to enhance learning for all students. To encourage and support student learning, it is important to heighten opportunities for families to participate in meaningful ways with their children's education. The recent priority aimed at enhancing relationships between home and school rests soundly on the theoretical underpinnings proposed and described by Bronfenbrenner (1979), Coleman (1987), and Pianta and Walsh (1996). These individuals, among others, conceptualize how children's development occurs across home, school, and community settings. Just as learning does not stop when children leave the school building at the end of the day, home influences cannot be separated from children at the beginning of the school day. Both school and home reciprocally influence and help determine the path children's development takes. Home-school collaboration reflects the critical interface these two vital, socializing systems have on children's learning. The focus of home-school collaboration becomes one of building and enhancing connections between these systems to support and maximize the learning potential of children.

Efforts by educators to increase family-school partnerships stem from a variety of cultural, sociological, and policy-related changes over the years. Increasing numbers of women obtaining college degrees and joining the workforce, increased mobility as people find new jobs, and higher divorce rates have affected the manner in which children are educated and raised. Day care needs, issues related to moving, financial stressors of single parents, increased social isolation owing to weakened social support networks, and lessened time, support, and supervision for children made it apparent that the traditional manner in which families and schools interacted was insufficient. Limiting and prescribing roles for families no longer suffices in preventing and solving children's school-related problems.

Over time, researchers and practitioners have grown increasingly interested in ascertaining which aspects of a child's "world" are most likely to encourage successful outcomes in school and in life. Most of the data found in over 200 journal articles existing in this literature database are correlational in nature. Nonetheless, the numerous findings can be aggregated to show that parent involvement does indeed positively and significantly influence academic outcomes for students (Henderson & Berla, 1994). Valuing, supporting, and welcoming families' efforts to support their children's learning has been associated with a variety of indicators of successful student performance. These include higher academic achievement (e.g., test scores, grades), higher rates of school engagement and attendance, reduced behavior problems in classrooms, fewer suspensions, and lower dropout rates. It has grown increasingly apparent that the more families and schools are able to collaborate, the more likely benefits are noticed for not only students, but also their families and schools. Several benefits noted by Epstein (1995) are summarized in Table 1.

Until recently, the primary focus of family involvement research was identifying the effects of family or home environmental conditions on student perfor-

Table 1. Benefits of home-school collaboration for students, families, and schools

For students

- More positive attitudes toward school
- Higher achievement in reading
- Higher quality and more grade-appropriate homework
- Completion of more homework on weekends
- Observing more similarities between family and schools.

For parents

- Receiving ideas from school on how to help their children
- Learning more about educational programs and how the school works
- Becoming more supportive of children
- Becoming more confident about ways to help children learn
- Gaining more positive views of teachers and the school

For Teachers and schools

- Improved teacher morale
- Higher ratings of teachers by parents
- Teachers' rating of parents as more helpful
- Improved student achievement
- Parents support schools and bond issues

Source: Epstein (1995).

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mance. Much less research focused on the effect of the *transactions* between home and school. In contrast, current work is based on systems theory and consequently is directed more specifically at understanding the effect of the interface of family and school on children's performance. This chapter, which serves as an extension of the original chapter by Christenson (1995a), continues to underscore an emphasis on the importance of building trust with families, maintaining collaborative relationships, and using a problem-solving approach to facilitate constructive partnerships between families and educators. Perhaps the most profound change in the last 5 years is the immense support and attention these points have received. Recent legislative policies specifically direct schools to forge partnerships with families as part of school reform initiatives. National and state agencies and organizations now actively promote family and community involvement through standards of recommended goals, practices, materials, and funding. For example,

1. Title 1, Elementary and Secondary Education Act of 1965 as amended by Improving America's Schools' Act of 1994 (P.L. 103[illegible] 382) requires states and school districts to include parental input at the local school level.

2. Parent Participation, Goal 8 of the National Education Goals Panel (1998) (http://www.negp.gov/page 3-1) states: "By the year 2000, every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children." The goal's three objectives are informative for practice:
   - Every state will develop policies to assist local schools and local educational agencies to establish programs for increasing partnerships that respond to the varying needs of parents and the home, including parents of children who are disadvantaged or bilingual, or parents of children with disabilities.
   - Every school will actively engage parents and families in a partnership that supports the academic work of children at home and shared educational decision making at school.
   - Parents and families will help to ensure that schools are adequately supported and will hold schools and teachers to high standards of accountability.

3. National Standards for Family Involvement Programs (National P. T. A., 1997) are intended to promote meaningful parent and family participation, raise awareness regarding the components of effective programs, and provide guidelines for schools wishing to improve their programs.

4. The U.S. Department of Education (1997) issued a framework for developing contracts with all members of a school community (including parents) in which the necessity of a shared responsibility for student learning is emphasized.

As a result, many school districts have developed district guidelines for promoting family involvement in education (Rutherford, 1995). For example, in 1996 Minneapolis Public School District adopted official family involvement standards that guide implementation of programs across the 78 schools (Minneapolis Public Schools, 2000).

Although school personnel are beginning to realize and talk about the importance of partnering with families, many are unsure of how to go about doing it in a welcoming, empowering way and are often frustrated with parents not participating in the activities they have designed for them. Schools tend to talk the talk of family involvement; they do not yet necessarily walk the walk. Too often schools set the agenda despite the collaboration rhetoric (Swap, 1993). Yet evidence exists that parents (Christenson, Hurley, Sheridan & Fenstermacher, 1997), teachers, and students (Metropolitan Life Survey, 1998) desire a more proactive role for families in home-school partnerships. Given the historical and cultural roles of families and teachers in schools, it has been recommended that schools must take the responsibility for reducing barriers to family involvement and be the first to reach out to parents in innovative, nontraditional ways (Davies, 1993).

Others have questioned the degree to which families share equal power with educators, particularly in decision-making situations (Weiss & Edwards, 1992; Harry, 1992). Educators may feel threatened about losing control, power, and prestige over educating children by relinquishing too much decision-making authority to families (Edwards, 1992). Also, families are used to being blamed for their children's failure in school and being told what to do by schools. Moving toward an emphasis on including all families, educators are encouraged to be the first party to reach out to ask families to share their guidance and knowledge of their children. While current actions may not necessarily reflect the belief in the importance of shared responsibility for student outcomes, the orientation is clearly continuing to move toward an emphasis on the value of partnering with all families.

In general, there is agreement that parents should be involved in schools, despite the fact that home-school collaboration is a multi-dimensional concept that remains ill defined, and school personnel are not necessarily sure of how to welcome all families as partners. In this chapter, we support the concept of family and schools as partners proposed by Christenson and Sheridan (2001). As can be seen in Table 2, home-school collaboration, when defined as partnering, is a philosophy and way of thinking about sharing information and resources to foster positive school and learning experiences for children and youth.

The challenge for school psychologists and other school personnel is to facilitate the development of an environment that exudes the core belief that schools cannot fulfill their mission of successfully educating all children if families are excluded from the process. Collaborating with families has to be much more than an activity—it must be a pervasive attitude. Home-school collaboration is dependent upon a school's responsiveness to family needs by empowering parents to share in the decision making that is likely to affect the way schools currently work. In the following section, basic considerations for establishing productive, positive, and central relationships with families are presented.

BASIC CONSIDERATIONS

Key Points for Effective Home-School Collaboration

Home-school collaboration is a preventive, problem-solving approach focused on supporting learners. The primary reason for families and schools to collaborate is to support the growth and development of students academically, behaviorally, and socially. Therefore, the goal of collaboration is student-focused, not simply family-involvement focused. Although the focus is on joining forces to facilitate children's success in school, benefits are also noted for families and schools in the process of collaborating to prevent problems and help children succeed. For example, optimizing the family-school relationship has been shown to be a protective factor for students and families "at-risk" (Weissberg & Greenberg, 1998).

As in any relationship, outcomes are more effective, and riddled with fewer barriers, when the basis for convening is to achieve a shared goal rather than to solve a problem. However, as families and school personnel often only interact when problems arise, the need for a solution-oriented, problem-solving approach is essential. Indeed, the extent to which families and schools come together to effectively solve pending crises can encourage or discourage future attempts to interact and collaborate on the part of both educators and families. In discussing how effective connections are made between families and schools, Christenson and Godber (2001) state:

Table 2. Defining features for family and school as partners

- A ***student-focused philosophy*** wherein educators and families cooperate, coordinate, and collaborate to enhance learning opportunities, educational progress, and school success for students in four domains: academic, social, emotional, and behavioral.
- A belief in shared responsibility for educating and socializing children: both families and educators are *essential* and provide resources for children's learning and progress in school. There are no prescribed roles or activities for families or educators; rather, options for active, realistic participation are created.
- An emphasis on the quality of the interface and ongoing connection between families and schools. Creating a constructive ***relationship*** (how families and educators work together in meaningful ways) to execute their respective roles in promoting the academic and social development of children and youth is most important.
- A ***preventive, solution-oriented*** focus, one where families and educators strive to create conditions that facilitate student learning, engagement, and development.

Source: Christenson and Sheridan (2001).

> The focus is on creating a collaborative ethic, which refers to a fundamental way for families and schools to work together in which (1) the relationship or interface between families and schools is emphasized over the specific role either should or could assume, and (2) problem solving provides a systematic, structured way of creating mutual support for interventions and activities that improve the educational experience for students, engage students as learners, or orient them to a more positive trajectory for development (p. 456).

Home-school collaboration reflects the belief that both families and educators are critical for socializing learners. More than ever, schools and teachers today need to work together and support each other's efforts for children and youth to thrive. Reaching this goal requires an appreciation of the numerous ways both educators *and* families support children's learning. Bempechat (1998) raises interesting questions on how adults socialize children and youth to be learners, and how children perceive learning as a worthwhile endeavor. Also, based on an extensive review of the literature, Christenson and Peterson (1998) identified six factors (i.e., practices) that families, schools, *and* communities employ to create conditions that positively influence varied indicators of students' school performance. These factors are presented in Table 3. While families and educators contribute to student learning in different ways, their roles are both equally important and necessary for fostering students' belief in the importance of learning and the value of school. Consistent messages between home and school have been shown to reduce barriers facing students, particularly when cultural or ethnic differences exist (Phelan, Yu, & Davidson, 1994).

To accomplish this consistency, both families and schools must understand their overlapping roles and responsibilities in making the collaborative relationship successful (Epstein, 1995). While the role of teachers for children's education is well established, the critical role played by parents is often underestimated. Yet there are countless ways families influence their children's learning (see Christenson, Rounds, & Gorney, 1992). Moles and D'Angelo (1993) assert that the underlying philosophy when collaborating with families must be: "Every family functions as a home learning environment, regardless of its structure, economic level or ethnic or cultural background. Consequently, every family has the potential to support and improve the academic achievement of its children" (p. 30). Home-school collaboration efforts need to encompass practices and beliefs that make families feel respected, empowered, and consulted for their knowledge and expertise of their children.

Home-school collaboration requires broad, meaningful opportunities for parent participation. A common perception of what parent involvement entails tends to be limited to activities designed for families by school personnel; for example, volunteering in the classroom, making copies, helping children with their homework, or serving as chaperones for field trips.

Table 3. Six factors encouraging children's learning

Practice	*Definition*
Standards and expectations	The level of expected performance held by key adults in children's lives.
Structure	The overall routine and monitoring provided by key adults for youth.
Opportunity to learn	The variety of learning options available to youth in the home, at school, and within the community.
Support	The guidance provided by, the communication between, and the interest shown by adults to promote student progress in school.
Climate/relationships	The amount of warmth and friendliness, praise and recognition, and the degree to which the adult-youth relationship is positive and respectful.
Modeling	How adults demonstrate desired behaviors and commitment/value toward learning and working hard in their daily lives.

Source: Christenson and Peterson (1998).

While parents want to be involved with their children's education, they may not view these preconceived roles as allowing for as broad, or meaningful, participation as they would prefer (Harry, 1992). In a study sponsored by the National Association of School Psychologists (NASP), Christenson et al. (1997) found that parents desired more parent involvement activities than schools found feasible to provide. Parents ranked 33 family involvement activities in order of preference, and school psychologists ranked them in order of feasibility. Although significant overlap existed, parents' mean ratings were higher than those of school psychologists in 94% of the cases. The authors concluded that "the goal in planning involvement programs is to achieve a match between what parents want (would use) and what schools perceive as feasible for supporting student performance. This match can best be achieved with parent-educator input and reciprocity in planning" (p. 127).

A change in parent-professional discourse has been recommended to allow opportunities for parents to be true *co-teachers* who share important, decision-making power with school personnel at all levels in the functioning of the school (Comer, Haynes, Joyner, & Ben-Avie, 1996). Effective collaboration with families creates avenues for parents to pursue initiatives that may not stem from educators, but that are still viewed by parents as critical in fostering a positive learning environment. Based on the family-school partnership work of Epstein and others, the National Standards for Parent/Family Involvement Programs developed by the National P. T. A. (1997) reflect the need to broaden traditional conceptions of family involvement. Combined with quality indicators and sample applications, the six national standards follow:

1. Communicating: Communication between home and school is regular, two-way, and meaningful.

2. Parenting: Parenting skills are promoted and supported.

3. Student learning: Parents play an integral role in assisting student learning.

4. Volunteering: Parents are welcome in the school, and their support and assistance are sought.

5. School decision making and advocacy: Parents are full partners in the decisions that affect children and families.

6. Collaborating with community: Community resources are used to strengthen schools, families, and student learning.

Similarly, in a handbook published by the U.S. Department of Education (1997) a commitment to engaging families, educators, and communities by outlining the shared responsibility necessary for student learning is shown. According to the *Compact for Learning: An Action Handbook for School-Family-Community Partnerships*, all members of a school community are responsible for holding high standards for students, enhancing home-school communication, and facilitating the development of strong family-school partnerships. If school psychologists and other educators limit their view of families to traditional, preconceived roles, then a myriad of potential opportunities for building relationships with families—across home, school, and community settings—may be lost. Clearly, best practices in home-school collaboration require a redefinition of what constitutes parent involvement.

Building relationships for effective home-school collaboration takes time, effort, and leadership. There is no single approach or model that will work with all families. Building positive, sustainable relationships between educators and families for the purpose of supporting student growth and performance takes time and effort and requires leadership that facilitates and fosters these efforts. A truly flexible, collaborative approach affords a broad range of roles and responsibilities for families working together with educators, yet is in tune with the desires and wishes of members of each unique school community. Both quantity and quality make a difference in how successful schools are when they reach out to invite and include parent participation. Seeley (1989) claims that schools that have experienced success in engaging families do many of the same things as other schools have attempted but that "the difference is that these schools do more of these things, more persistently, because they are now operating on a different model of schooling—a model in which parent involvement is a necessity and the school is seen as a collaborative community learning center" (p. 47). Patrikakou and Weissberg (1999) found the quality of family-school interactions and the degree to which parents perceive teacher outreach efforts as welcoming were important determinants in how, when, and if families became involved with their children's schools.

Home-school collaboration efforts must be considered a priority, permeating all school actions, if benefits are to be accrued (Comer et al., 1996). These efforts reflect the importance of collaborating with families to influence interactions and, consequently, are not viewed as yet another "program" the school offers (e.g., "the family involvement coordinator takes care of that"). It must be recognized that the process of developing such relationships takes time, typically requiring a minimum of 3–5 years for an impact to be noted (Epstein, 1995), and would have implications for our assessment and intervention practices, particularly in terms of co-roles for families and educators.

Barriers and Challenges

It is true that benefits for students, families, and schools exist when home-school collaboration is taken seriously. It is also true that the road getting there is wrought with numerous interpersonal, logistical, and systems-level barriers. The categorization of barriers by Liontos (1992) (see Table 4) is useful because it highlights attitudinal and logistical barriers for parents, teachers, and schools. Collectively, the barriers for families and educators reveal the challenges facing home-school collaboration. An important beginning is to recognize that barriers exist for both partners in the relationship.

Logistical barriers facing families include lack of time due to several jobs, single parenting, transportation issues, lack of day care options, and scheduling conflicts. Attitudinal barriers, such as feelings of inferiority, alienation, or hostility toward educators as a result of their personal negative experience in school, grow as miscommunications and misunderstandings arise about how schools work, the resources schools provide, and how they can assist their children's success in school. Furthermore, Hoover-Dempsey and Sandler (1997) have proposed that parental self efficacy, construction of the parental role, and the messages and invitations presented to parents influence parents' abilities either to initiate, or to be receptive to, interactions with school staff.

Logistical barriers facing educators relate to lack of time, training, and administrative support. Time factors are frequently a result of increased responsibilities for teachers, often in conjunction with the

Table 4. Barriers and misunderstandings

Barriers for parents

- Feelings of inadequacy, failure, and poor self-worth
- Negative attitudes or bad experiences with schools
- Suspicion or anger that schools are not treating them equally
- Leave it to the schools
- Cultural and language barriers
- Economic, emotional, or time constraints
- Logistical problems: child care, transportation, scheduling

Barriers for schools and teachers

- Commitment to parent involvement
- Confusion about the role of teachers
- Concerns about turf and territory
- Doubts about their abilities to work with at-risk parents
- A belief that at-risk parents do not care and will not keep commitments
- Low teacher expectations for at-risk children
- Schools assume a passive role or fail to help parents feel welcome
- Communication from schools focuses on the negative
- Dwelling on the hard-to-reach concept
- Lack of time and funding

Source: Liontos (1992).

increasing demands for children in their classrooms. Teachers have rarely taken courses during teacher preparation or engaged in ongoing professional development activities to work with families *as partners* (Morris & Taylor, 1998). Weak administrative support for teachers' time and effort in reaching out to families can squelch future proactive, teacher-initiated, home-school collaboration activities. Attitudinal barriers for teachers and educators include misconceptions about the ways families support children's learning, fear of reaching out to families due to cultural or linguistic differences, stereotypes about poor, minority families, and/or pitying families for their situations and therefore holding lower expectations for children's performance. Furthermore, incomplete knowledge about and experience with different cultures and lifestyles may lead teachers to avoid contact with families, thereby perpetuating the perception of parental apathy and lack of support for classroom efforts (Thorp, 1997).

Barriers must be identified, acknowledged, understood, and systematically removed. Conceptualizing barriers for families and schools differs from examining *why* families choose not to be involved—it requires school personnel to examine their current school practices for including families. Barriers often can be reframed as challenges for parents, educators, and the partnership, all needing time for the stakeholders to engage in ongoing dialogue and problem solving about children's needs. Families need repeated, positive opportunities to share their thoughts, desires, expertise, and expectations; and teachers need time, support, and training to work effectively with families. Despite the requirements for time, dedication, and leadership (and complexities of these), many situations can be improved or ameliorated when teams of parents and educators work together to proactively address concerns.

School Psychologists as Change Agents

Changing the way educators and parents think about home-school collaboration is a big task, often involving changing the way schools do business. However, the benefits to be gained are many and far-reaching. Although it is a process that often is accompanied with challenges, the rewards and subsequent opportunities can be observed in the academic, social, and behavioral progress and performance of students. School psychologists can work to obtain these benefits by acting as change agents.

In her call for school psychologists to accept leadership roles for enhancing family-school partnerships, Epstein (1992) claimed we are in an ideal position to facilitate initiatives surrounding planning, implementing, and evaluating strategies for building constructive relationships between home and school. Many of our roles fit naturally into these initiatives. First, school psychologists have a working knowledge of current research on outcomes related to home-school collaboration, as well as on effective strategies for collaborating. Given this knowledge, they are in a strong position for disseminating information to administrators, teachers, and families and advocating for change at the systems level. Second, school psychologists work with teachers and families regularly, giving them the opportunity to put collaborative practices into action. Some examples include (a) setting the tone for parent-educator meetings to ensure that families' ideas, views, and support are solicited; (b) changing the way parents are invited and informed about meetings to reduce barriers to their attendance; and (c) consulting with teachers to develop efficient, effective ways to communicate positive information to parents about their children regularly. Finally, school psychologists' training in program evaluation can be utilized to assess how well collaboration efforts are being implemented, and how well they are working to increase family involvement and student achievement.

BEST PRACTICES

Attitudes, Relationships, and Actions: A Framework for Home-School Collaboration

The goal of best practices in home-school collaboration is to work as partners to support children's learning. Thinking of family and school as "partners" does not refer to a specific model or approach. Rather, it refers to a mutual effort toward a shared goal, and as a result implies shared responsibility of families and educators for supporting students as learners (Christenson & Sheridan, 2001).

We contend three components, Attitudes, Relationships, and Actions, are essential to creating positive home-school collaboration to enhance students' learning and schooling experiences. The components, which are theoretically driven or scientifically based, are

1. Attitudes: The values and perceptions held about family-school relationships.
2. Relationships: The quality of interface and type of family-educator interactions.
3. Actions: Strategies for building shared responsibility and the partnership.

As shown in Figure 1, attitudes, relationships, and actions mutually reinforce one another. In this conceptualization, attitudes held by school staff set the stage for the relationships that are developed with families and the kinds of actions carried out to support children's learning. Relationships are relevant, because their quality often is the factor that makes or breaks the efforts of educators to address an individual- or systems-level problem. Finally, actions are *what* schools and families do to form partnerships. Actions refer to behaviors; that is, how schools join with families and how schools and families work together to support children's learning, both at home and at school. In this section, considerations for how school psychologists can facilitate effective attitudes, relationships, and actions for promoting home-school collaboration are described.

ATTITUDES

Working as partners is an attitude—not solely an activity to be implemented. Although both parents' and educators' attitudes are integral to forming productive relationships, researchers have shown that educators' attitudes are critical to the success of partnerships. For example, how schools reach out to families was determined by Dauber and Epstein (1993) to be more important determinants of parent participation in education than were parents' educational, socioeconomic, or ethnic backgrounds.

Attitudes that foster home-school partnerships. Attitudes set the context for *how,* and even *whether,* schools and families work together. A major program of research by Epstein and Dauber has consistently produced evidence that patterns of teacher attitudes are an important factor in parental decisions about participation. Parents who interacted with teachers who held positive attitudes about partnerships and expressed interest in parent involvement were more positive about school, more involved in the school, and expressed stronger beliefs in the "goodness" of school than parents who interacted with teachers who placed a low priority on family-school partnerships (Dauber & Epstein, 1993). Illustrations of three essential school-based attitudes are presented in Table 5. This list is not exhaustive and can be expanded to fit the particular needs and situations of a school community.

Figure 1. Elements of best practices in building home-school collaboration

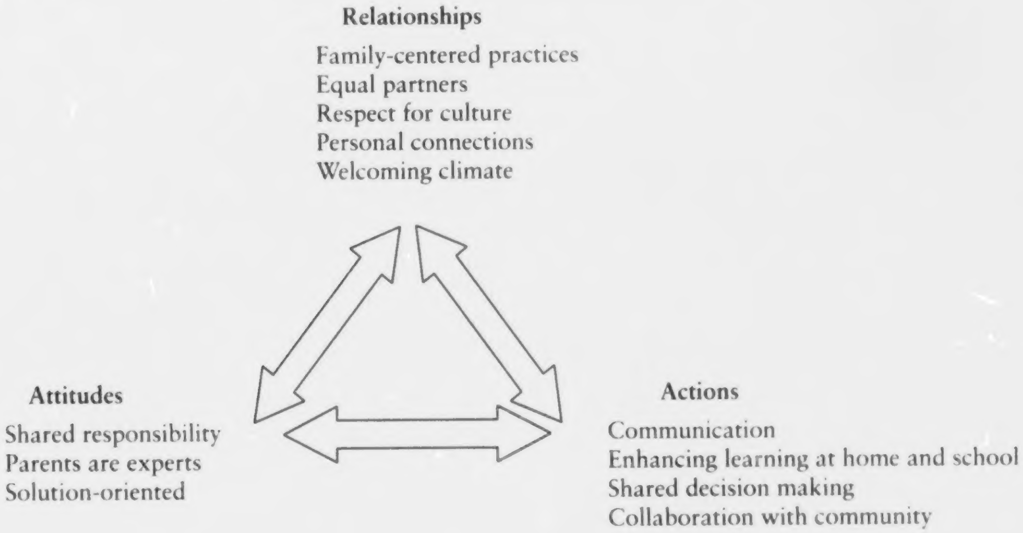
Relationships
Family-centered practices
Equal partners
Respect for culture
Personal connections
Welcoming climate
Attitudes
Shared responsibility
Parents are experts
Solution-oriented
Actions
Communication
Enhancing learning at home and school
Shared decision making
Collaboration with community

Table 5. Attitudes that foster family-school partnerships

Shared responsibility

- Home-school collaboration results in a shared responsibility among parents and educators for educational outcomes (Christenson, 1995b).
- Posture of reciprocity: With the provision of official channels for reciprocal rather than one-way discourse between educators and families, educators can begin the process of developing collaborative practice (Harry, 1992).

Parents are experts

- Parents' knowledge, expertise, and resources are valued as essential to children's success (Ooms & Hara, 1991).
- The message that both parents and teachers have important knowledge and skills to impart to students is consciously communicated at school (Raffaele & Knoff, 1999).

Preventive, solution-oriented focus

- The school recognizes its responsibility to forge a partnership with all families in the schools, not simply those most easily available (Ooms & Hara, 1991).
- The importance of seeking parents' views and expertise is promoted in developing policies and solving school-wide problems; with some schools giving parents important decision-making responsibilities at a policy level (Ooms & Hara, 1991).

Shared responsibility. A key attitude that facilitates family-school partnerships is that educating and socializing children is a *shared responsibility*—both families and educators are considered *essential* and providers of resources for children's learning and progress in school. Supported by the recognition that children perform better when in and out-of-school time is used constructively (Christenson & Peterson, 1998; Entwisle, Alexander, & Olson, 1997), shared responsibility is the cornerstone of the NASP position statement on home-school collaboration (www.naspweb.org/information/pospaper_hsc.html).

Parents are experts on their children. Once children are school-age, they spend approximately 75 percent of their waking hours outside of school (Clark, 1993). Parents hold valuable information about their children's developmental history, likes and dislikes, and learning style. This information is vital to understanding the many contexts of children's lives to design interventions and plan evaluations. Furthermore, all parents are involved (directly or indirectly) in their children's learning. All parents are their children's teachers, from setting expectations for their children's learning to providing direct help and support with schoolwork. Parent involvement in education does not only happen in school buildings.

A preventive, solution-oriented focus. This attitude values the efforts of families and educators for creating conditions that facilitate student learning, engagement, and development. As part of this focus, educators recognize that all parents have strengths that can be utilized to address both individual and systems-level concerns. Educators also recognize that problems (academic, behavioral, social) are best solved through coordinated efforts among home, school, and community. Consultation that involves parents, students, and educators in teaming to solve learning and behavior problems has been linked to decreased referrals for testing and improved teacher perceptions of students with learning or behavior difficulties (Fuchs, Fuchs, & Bahr, 1990) as well as improvement in academic, social, and behavioral performance (Sheridan, 1997). Effective solutions require non-blaming interactions (Weiss & Edwards, 1992) and often require consistent messages and behaviors across multiple settings (see Reid & Patterson, 1996).

A role for school psychologists. Two relevant questions to be answered with respect to the proposed attitudes seem to be

1. At my school, how would the belief system about the relationship between parents and educators with respect to children's school performance be characterized?
2. In what ways do key stakeholders believe in shared responsibility between home and school?

Belief in shared responsibility is consistent with the literature on empowering families to be active partners in their children's learning. Parents are not empowered as partners when educators hold attitudes that suggest parents are not competent to support their children's learning and/or prevent or address learning problems. Defining empowerment as removing barriers to provide equal opportunity (e.g., opportunity for parents who experienced negative school experiences to learn about school policies and practices), Cochran and Dean (1991) described three stages of empowerment: (a) improving parents' self-efficacy, (b) building a relationship between the parent and at least one school staff person, and (c) social action—parents' actual involvement in decision making. Should the belief in shared responsibility and empowering families for educational outcomes not be present, school psychologists may want to conduct inservice training on the empirical basis for shared roles and responsibilities (e.g., Christenson & Peterson, 1998) and parents' roles in the socialization of learners (Bempechat, 1998; Scott-Jones, 1995). This would provide opportunities for dialogue about this content.

RELATIONSHIPS

Positive attitudes toward families and about the benefits of an effective family-school relationship for children's performance in school are a pre-requisite for initiating and maintaining family-school relationships. These relationships are conducive to school success. In their family-school collaboration project in New York City, Weiss and Edwards (1992) found that creating constructive *relationships* (the quality of the interface and ongoing connection between families and schools) to execute schools' and families' respective roles and responsibilities over time is more important than solving the immediate presenting concern for students at a family-school meeting.

Trust, an important factor in building relationships, is built through multiple interactions in which parents and school personnel respond to each other's needs consistently. The goal is for families to trust that educators are working in their children's best interests, for educators to trust that families are working in their children's best interests, and that they will jointly plan and share decisions about supporting students' educational progress. Unfortunately, trust between families and schools does not always progress to this level (Adams & Christenson, 1998).

Trust in the family-school relationship has tangible benefits for children. When families and educators trust each other to work collaboratively to support children's learning, parents participate more frequently in family involvement activities (e.g., parent-teacher conferences, open houses) (Adams & Christenson, 1998). Furthermore, Adams and Christenson (2000) have shown that trust has a small but significant positive relationship with students' grades and credits obtained toward high school graduation. They also found that the quality of the relationship is a significant predictor of parent and teacher trust.

How to build relationships. Because of families' and schools' particular needs and histories, attempts to connect with families require a tailored approach. The following practices are important components for school psychologists to consider when building relationships.

1. Family-centered practices: In research and practice, early intervention programs tend to involve families as integral partners in their children's learning and behavior development. There has been a call for continuing these practices in kindergarten and across school years (Pianta & Walsh, 1996). Relationships with families, especially those less connected to the schooling process, may benefit from applying strategies implemented in early intervention programs, including a set of strategies referred to as family-centered practices. Family-centered practices involve a *family orientation*, in which the interest is in the whole family rather than just the child; *positiveness*, which is thinking the best about families without passing judgment; *sensitivity*, which involves empathizing with families and understanding their needs and concerns; and *friendliness*, or treating families as friends (McWilliam, Maxwell, & Sloper, 1999). A study by McWilliam, Maxwell, and Sloper found that special educators, regular educators, and families of children with and without disabilities desired more family-centered practices than currently provided or received in schools.

2. Develop trust: Trust does not occur accidentally or coincidentally; rather, it develops as educators engage in certain actions that actively promote trust. According to Margolis and Brannigan

(1990), such behaviors include (a) accepting parents as they are; (b) sharing information and resources; (c) focusing on parents' aspirations, concerns, and needs; (d) keeping their word; (e) discussing objectives openly; and (f) preparing for meetings. Also important are focusing on the interactive process with parents, using structured problem solving approaches, and listening empathically. Findings from Adams and Christenson (1998) suggested that we also (a) create opportunities to build personal relationships with families, (b) create opportunities to be co-learners with parents, (c) engage in shared governance with parents, (d) develop effective conflict management strategies, and (e) maintain a focus on student outcomes.

3. Equal partners: Schools often are seen as unapproachable, professional institutions, and parents often feel powerless in confronting educators when conflicts arise. When educators give up some of their "professionalism" and acknowledge parental expertise about their children and contributions to their education, some of parents' fears may be overcome, and an equal partnership can develop (Gareau & Sawatzky, 1995).

4. Respect for cultural diversity: Schools and homes representing two different worlds is a recurrent theme in the family involvement literature (Delgado-Gaitan, 1991; Gareau & Sawatzky, 1995; Liontos, 1992). There is not a common understanding across cultures of the purpose of education, nor an understanding of how parents from different cultural backgrounds perceive their role or that desired by school personnel (Bempechat, 1998). Schools are continually challenged to develop an understanding of the social, cultural, historical, and linguistic achievements of different cultures (Delgado-Gaitan, 1991; Liontos, 1992; Swap, 1993). Creating a school environment that is an extension of the many cultures and communities it contains can enhance effective collaboration and increase opportunities for it to occur.

5. Personal connections: Informal opportunities for interaction between families and educators are important to developing caring, trusting relationships. Gareau and Sawatzky (1995) found that contacts, such as calling parents to share some of the positive things their children have done at school, establishing a relationship on a first-name basis, and making face-to-face contact whenever possible, helped them to build personal connections with one another. We need to know parents have some trust and positive contact with educators before trying to address critical issues for students. Davies (1990; cited in Swap, 1993) refers to these contacts as "essential lubrication" for more serious intervention.

6. Welcoming climate: Many authors argue that schools need to work harder to make families feel welcome (Liontos, 1992; McWilliam et al., 1999). To be successful at attracting parent participation, schools need to make families feel welcome. A cheerful physical environment, holding social events such as open houses or family "make and take" nights, and creating a family resource center with literature, videotapes, and audiotapes for parents to check out are some of the ways to make schools more comfortable and welcoming (Tomlinson, 1996).

ACTIONS

The language of shared responsibility. Before engaging in specific actions in home-school collaboration, attention to the language used in reaching out to families is highly relevant. Often, schools believe in shared responsibility and try to involve parents in important decisions about their child or about the school as a whole, but they still have a high number of "uninvolved" families. We need to communicate with families so we are *inclusive, solutions-oriented*, and *optimistic* about children's performance and future (de Shazer, 1988). These principles will help families to feel important as partners with schools and will give them hope for creating optimal learning environments and addressing shared concerns.

Inclusive language means keeping parents informed, creating opportunities for exchange of information, and using non-blaming language. There are no problematic individuals (parents, teachers, or students), only a problematic situation that requires the attention of the student, home, and school—all for the benefit of the student. Being solution-oriented involves emphasizing solutions, not problems, and emphasizing student progress and improvement toward goals. Optimistic language involves keeping the focus on what the student needs for the best school experience, having an optimistic view of children's development, and believing in parents' abilities (de Shazer, 1988). These principles are infused throughout school psychologists' actions for home-school collaboration.

Actions represent how educators and families interact to create shared responsibility for student learning; hence, they provide opportunities to address student learning directly. Drawing on the work of many researchers and educators, we present specific examples of practices in Table 6.

Table 6. Best practices for home-school collaboration: Actions and sample applications

Communication (Christenson & Hirsch, 1998)

- Strive to maintain a positive orientation: Good news phone calls, invite and incorporate parent reactions to policies and practices, contact parents at the first sign of a concern, reframe language from problems to goals for students.
- Develop and publicize regular, reliable, varied two-way communication systems: System-wide family-school communication/assignment notebooks, telephone tree, Thursday folders and newsletters, and shared parent-educator contacts.
- Keep the focus of communication on children's performance: Use electronic technology; bi-directional communications regarding classroom activities, progress, suggested activities for parents (Ames, 1993); home-school notebooks/notes; family-school meetings with students present; shared parent-educator monitoring system (e.g., educational file, contract).
- Ensure that parents have needed information: Orientation nights with follow-up contact for non-attendees, parent support groups and home visits, home-school contracts, curriculum nights, monthly meetings on topics of mutual interest.
- Create formal and informal opportunities to communicate and build trust: Multicultural potlucks, grade-level bagel breakfasts, family fun nights, committees designed to address home-school issues, principal's hour.
- Underscore all communication with shared responsibility: Share information about the curriculum of the home, discuss co-roles (i.e., co-communicators); adopt a team approach for setting mutual goals for supporting children as learners; implement shared practices (i.e., common language about conditions for children's success).

Enhance learning at home and at school

- Ask parents what they would like from educators: Respond to parents' indicated needs for resources (information, support) (National P. T. A., 1997).
- Provide information: Sponsor workshops or distribute information to assist parents in understanding how students can improve skills, get help when needed, meet class expectations, and perform well on assignments; provide information on how parents can foster learning at home, give appropriate assistance, monitor homework, and give feedback to teachers; provide families with home learning materials (National P. T. A., 1997).
- Structure involvement opportunities: Families and educators share expectations and goals for the student (de Shazer, 1988); encourage the development of a personalized education plan for each student, where parents are full partners (National P. T. A., 1997).
- Recognize what parents are doing at home: Communicate the importance of positive relationships between parents and their children; provide opportunities for staff members and parents to learn and share successful approaches to supporting children's learning at home (National P. T. A., 1997).

Shared decision making

- Individual-level problem-solving and decision making: Encourage and facilitate active parent participation in decisions that affect their children, such as student placement, course selection, and Individualized Education Plans (IEP; National P. T. A., 1997); speak of concerns, goals, and possible solutions, not problems, deficits, or deficiencies; encourage perspective-taking, that is, both parents' and teachers' desires and feelings about a student are important (de Shazer, 1988).
- Involvement in special education planning and decision making: Parents as assessors and presenters of reports, policy makers, and advocates and peer supports (Harry, 1992).
- Involvement in school decision making: Provide understandable, accessible, and well-publicized processes for influencing decisions, raising issues or concerns, appealing decisions, and resolving problems; enable parents to participate as partners when setting school goals, developing or evaluating programs and policies, or responding to performance data; include parents on all decision-making and advisory committees and ensure adequate training for such areas as policy, curriculum, budget, school reform initiatives, safety, and personnel (National P. T. A., 1997).
- Provide training for staff and parents on collaborative partnering and shared decision making.

(Table continues on the following page.)

Table 6. (Continued)

Collaborating with the community

- Invite participation: Encourage employers to adopt policies and practices that support adult participation in children's education; foster student participation in community service; invite community members to be involved in school volunteer programs (National P. T. A., 1997).
- Collaborate with community agencies: Collaborate to provide family support services and adult learning opportunities; distribute information regarding cultural, recreational, academic, health, social, and other resources that serve families within the community; develop partnerships with local businesses and service groups to advance student learning and assist schools and families (National P. T. A., 1997).
- Publicize success: Publicize academic awards, honors, and test results in school and community newspapers; develop a comprehensive awards program that regularly recognizes achievements in all academic areas (Moles & D'Angelo, 1993).

Communication. Communication serves as the foundation for all home-school collaboration activities. Traditionally, communication between home and school has occurred in one direction: from school to home. If we want shared responsibility, then families and schools need to be co-communicators, exchanging information that enables both to assist children's learning (Moles & D'Angelo, 1993). Christenson and Hirsch (1998) recommended six tangible mechanisms for including families and keeping communication channels receptive to family signals:

1. Strive to maintain a positive orientation to all communication between family and school.

2. Develop and publicize regular, reliable, varied two-way communication systems.

3. Keep the focus of communication on child's performance.

4. Ensure that parents have needed information to support children's educational progress.

5. Create formal and informal opportunities to communicate and build trust.

6. Underscore all communication with a shared responsibility between families and schools.

Furthermore, *communications should be in person* whenever possible to avoid barriers for parents who cannot read or who do not speak English (Liontos, 1992).

Enhancing learning at home and school. An objective of National Education Goal 8, home support for learning is a crucial factor in enhancing children's learning. How parents support their children's learning, through words and actions, has positive effects on student achievement (Bempechat, 1998; Christenson et al., 1992). Schools often underutilize this resource. The following steps are ways to stimulate and enhance families' support for children's learning and development:

1. Ask parents what they would like from educators: A good starting point for working inclusively with families is simply to start asking families what it is they would like to see happen for their child, for families at the school, and for the school. It is essential to find out what families desire so that they can be active partners in promoting children's learning. Some roles for school psychologists include conducting surveys or needs assessments about the kinds of information and assistance parents would like to help them facilitate learning at home. Services for families, such as informational meetings on curriculum and school policy, inservices on helping children learn at home, or parent education in specific areas (e.g., parenting, adult literacy) should be based on parents' responses to the surveys and needs assessments.

2. Provide information: Parents often want to help their children with homework or provide learning activities to complement what they are learning in schools. To do so, they report needing information from school personnel about expectations, curricula, and teaching strategies (Scott-Jones, 1995). In their interview with parents about 33 involvement activities, Christenson and colleagues (1997) found that parents wanted more information on how schools function and children's development;

opportunities to interact with school psychologists, particularly about parental questions; and opportunities to dialogue with teachers. Fortunately, techniques are available. School psychologists can create joint interventions with parents, ranging from writing home-school notes, implementing Conjoint Behavior Consultation (Sheridan, Kratochwill, & Bergan, 1996), conducting solution-oriented family-school consultations (Carlson, Hickman, & Horton, 1992), and engaging in structured parent-educator problem solving (PEPS) (Christenson, 1995a).

3. Support what parents are doing at home: Parents do many things to support children as learners, from direct activities to setting expectations. These may include reading books to them, teaching them how to cook, having expectations for their behavior and school performance, and monitoring and supervising their use of time. This information could be used by schools to provide materials and resources to support families' efforts and to identify potential areas for demonstrating to parents other effective ways to help their children learn. The Megaskills Program is particularly noteworthy in this regard (Rich, 1992).

Shared decision making. Shared decision making involves parents and educators working together to improve the school and children's learning through participation on councils, committees, and planning and management teams. Parents and educators are involved in shared decision making at every level: individual child, classroom, school, district, and community (Swap, 1993).

1. Involvement in individual-level problem-solving and decision making: The strong effect of families on children's behavior and learning is rarely disputed. Schools can include parents by creating opportunities for exchange of information by asking parents for their observations/input, sharing expectations and goals for the child, inviting their assistance in addressing the concern, and speaking "our" language (we can do it together) (de Shazer, 1988). Canter and Canter (1991) present a structure to follow when contacting parents at the first sign of a concern that is inclusive, solutions-oriented, and optimistic (Table 7). Sheridan and her colleagues (Sheridan et al., 1996) developed and tested conjoint behavioral consultation (CBC), which is a systematic, indirect form of service delivery wherein parents, teachers, and school psychologists work together to address the academic, social, or behavior needs of a child. CBC consists of four steps: (a) Problem Identification, in which the problem is defined in behavioral terms, a goal is reached for behavior change, and a plan for collecting baseline data is made; (b) Problem Analysis, in which baseline data are analyzed to confirm correct identification of the problem and an intervention plan is developed; (c) Treatment (Plan) Implementation, in which the intervention is implemented and monitored, and training is pro-

Table 7. Canter and Canter's structure for communicating with parents of "potential problem students"

- Plan before you dial. Write down all the points you want to cover with the parent, and keep the notes with you as you speak.
- Begin with a statement of concern. "Mrs. Jones, this is Ms. Williams. I'm going to be Bobby's fifth-grade teacher. I wanted to speak to you because I want to make sure that this year is a successful one for your child."
- Get parental input concerning the problem. Demonstrate your concern for the parent's point of view. "I would like to know your view of Bobby's experience at school."
- Get parental input for what will be needed to make this year more successful. "I'd like to know what you feel we need to do to ensure Bobby has a good year this year."
- Explain that parent support is critical. "I believe you can help me with Bobby. I will be in touch with you throughout the year, because your support is vital. You are the most important person in your child's life, and Bobby must know we are working together to help him."
- Express your confidence. "I have complete confidence that by working together we will help Bobby to have a good year. I want to assure you that I've worked with many children like Bobby before, and I am certain I can make this year a great year for your son."

Source: Canter and Canter (1991).

vided to teachers and families if necessary; and (d) Treatment (Plan) Evaluation, in which teachers and families decide whether the behavior goals have been met and discuss ways either to modify, continue, or terminate the intervention. Effective consultation meetings are based on non-blaming interactions and a problem-solving orientation and structure.

2. Involvement in special education planning and decision making: Most school psychologists spend the bulk of their time involved in special education-related activities. Several openings for meaningful family-school partnerships in educational planning and delivery exist in the special education realm. Federal special education policy mandates family involvement in special education referral and placement; however, it leaves wide room for how families are involved. According to Harry (1992), giving parents a meaningful equal role in special education decision making will require changing the parent-professional discourse. Based on ethnographic research, she developed a four-part classification for establishing equal partnerships between families and schools for making special education decisions. The first role, *parents as assessors*, involves parents in the entire assessment process, drawing on their knowledge of their children's developmental and cultural history that may account for developmental, learning, and behavioral patterns. Second, parents can serve as *presenters of reports*, giving oral or written reports that are official documents and part of the child's educational record. The third role, *parents as policymakers*, involves parents in decision making about special education and cultural or community concerns. Finally, the fourth role involves *parents as advocates and peer supports*. In this role, parents provide peer advocacy, support at IEP meetings, and mutual interpreters between the cultures of the community and of the school. These roles, albeit developed within the context of special education, are equally applicable for general education.

3. Involvement in school problem-solving and decision making: Shared school decision making is incorporated in programs and policy at the local, state, and federal levels. Parents and community members become partners in formal school decision making through varied means—P. T. A./ P. T. O. or advisory councils and committees, assisting in committees to gather information to make recommendations about school policy or participating in decisions about hiring administrators or adopting curricula (Swap, 1993). Direct service actions for school psychologists could include training parent representatives in decision-making skills, collaboration, and ways to communicate with other parents about school improvement activities. However, simply mandating parent participation in activities or programs guarantees neither active participation nor parent influence on child or program outcomes. Some schools have taken full advantage of the opportunities provided by shared decision making (Swap, 1993). An example illustrating the power of a home-school team to focus on educational concerns can be found in the Comer Process (Comer et al., 1996). Structured family-school meetings for individual or systems-level concerns are another relevant example of practice for school psychologists (Weiss & Edwards, 1992).

Collaborating with the community. In collaborating with communities, community resources are used to strengthen schools, families, and student learning (National P. T. A., 1997). Some opportunities for school psychologists to facilitate community collaboration include:

1. Inventory community needs, resources, and values: To develop programs that address the needs and values of the community, educators need to know what exists in the schools and communities regarding needs and existing resources. Two ways to conduct this inventory are resource mapping, which involves depicting what is currently in place in schools and communities and what needs they address (Fetro, 1998), and conducting a needs assessment. The needs assessment could involve surveys or community meetings to solicit information and identify people who are interested in becoming involved in school efforts to support children's learning (Carlyon, Carlyon, & McCarthy, 1998).

2. Invite participation: People and groups seeking to be involved in family-school efforts should feel

welcome. Potential participants to be invited may be identified in the inventory of community resources. It has been recommended that educators consider developing mechanisms to match offers of family or community resources with ongoing programs in the school so they can fill gaps rather than duplicate efforts (Carlyon et al., 1998).

3. Collaborate with community agencies: School psychologists can collaborate with existing community agencies to provide family support services, child and family physical and mental health services, adult learning opportunities, and/or child educational enrichment programs. Such collaboration can further address families' needs and enable them to participate more fully in activities that support education (National P. T. A., 1997).

4. Celebrate and publicize successes: Community collaboration should acknowledge achievements and contributions of individuals and groups to improve the educational programming, opportunity, and success of children (Carlyon et al., 1998).

Creating a family-school team: A prerequisite. A precondition for home-school collaboration actions is to establish a family-school team to address issues that only can be solved with home and school input. The following guidelines are adapted from Fetro's (1998) work.

The family-school team should include key players who have responsibilities for and a stake in promoting student learning, such as teachers, school social workers, school psychologists, administrators, health staff, parents, students, and/or community representatives. The responsibilities of the family-school team could include assessing student, family, and educator needs; mapping existing school and community resources that could contribute to successful home-school collaboration; identifying gaps and duplications in services and resources; developing action plans; and monitoring implementation. Explicit information on action steps to be taken to create family-school teams is provided by Epstein (Epstein, Coates, Salinas, Sanders, & Simon, 1997) and Davies (Davies, Burch, & Johnson, 1992), past co-directors of the federally funded Center on Families, Communities, Schools, and Children's Learning.

School psychologists have several potential roles to play in fostering home-school collaboration, at community, district, school, and individual levels. Table 8 presents a sampling of the types of activities school psychologists can perform under these different levels.

Actions represent opportunities for educators to join with families, enlist, and expand their support to enhance children's learning. However, home-school collaboration is a process, not an event or set of events. These actions serve to reinforce the attitudes held by schools and the relationships between schools and families, and the relationships and attitudes, in turn, influence schools involvement actions (see Figure 1).

Based on research on effective parent-teacher relationships for promoting learning and behavior, Patrikakou and Weissberg (1999) identified seven components of effective family-school partnership programs. Called the Seven P's, these components inform the development of strategies and tools for partnership-building.

1. Partnership as a priority: Each school needs to define for itself the types of partnerships that are most important and then set priorities for interventions that target them. Beyond a mission statement that communicates to families the importance of family-school relationships, this also requires educator training and resources.

2. Planned effort: Effective family-school partnerships are carefully planned and implemented, and parents' needs, views, and patterns of involvement are sought.

3. Proactive and persistent communication: Regular, continuous communication with parents throughout the school year about class rules, expectations, goals, and curricula will involve them in the educational process in meaningful ways (e.g., use their input).

4. Positive: Communication between school and home also should happen when the child is performing successfully. Positive input can be an indication to parents that the teacher sees the whole child, not just his or her areas of weakness.

5. Personalized: What draws parents' attention is specific information about their own child. Con-

Table 8. District, school, and family roles for school psychologists in home-school collaboration

District level

- Write policy and develop performance standards and mission statements
- Evaluate existing home-school collaboration programs
- Promote the benefits of home-school collaboration: getting the word out
- Provide inservices or continuing education to school personnel on partnering with families

School level

- Initiate a needs assessment on what parents and schools would like from one another
- Start a family-school team for promoting and implementing home-school collaboration; participate on the team
- Work with administrators and community/business leaders to fund and start a family resource center in the school building
- Set up a school governance team with family participation
- Follow due process procedures for involving families in special education decision making
- Write a school mission statement that reflects attitudes of partnering and building relationships with families
- Cover a classroom for 1 hour a week to allow teachers time to make family phone calls
- Provide parent education workshops on topics of interest to families
- Establish "family nights" at school
- Write grants for programs and services that support families

Family level

- Work with community resources to coordinate services for families in need
- With teachers, visit homes of families who did not attend parent-teacher conferences or attend IEP meetings to establish relationships with parents, communicate information, share tips on supporting children's development, and learn more about families
- Before assessment or IEP meetings, meet with families to ensure that they understand evaluation results, the content of the IEP, and their rights
- Give parents a role to play at assessment/IEP meetings (e.g., assessor, presenter, advocate)
- Participate and consult in parent-teacher meetings
- Provide parents with the skills to cope with disruptive behavior
- Notice and celebrate parents' contributions to the school through personal notes, articles in newsletters and local newspapers, or celebration lunches

Source: Adapted from Harry (1992); National P. T. A. (1997); Swap (1993); National Association of School Psychologists (1998).

crete, specific examples of their child's strengths and weaknesses can lead to higher levels of collaboration, maximizing the benefits for the child.

6. Practical suggestions: Teachers expand the learning environment beyond the classroom by offering parents practical and specific suggestions on how they can help their child's education at home.

7. Program monitoring: Systematic evaluations of family-school partnership programs can address parent feedback and calibrate partnership practices to increase effectiveness.

The challenge is: Building family-school partnerships takes time. School psychologists often hear about "uninvolved families," or that teachers never see the families they most want to see to address learning issues. Even if schools implement components of effective home-school collaboration programs, we will not see these families unless we have attitudes and relationships that set the context for shared responsibility and positive partnership actions. For example, schools may set up a system of "practical suggestions," but hold the attitude that parents are ineffective at providing rich learning environments at home. The logical implication is that many families will sense this attitude and choose not to be involved. We need to examine our school policies and practices and the messages they send to families, explicitly and implicitly, before saying, "I never see the families I want to see."

SUMMARY

The goal of best practices in home-school collaboration is to support children's learning by building positive connections and relationships with families.

Home-school collaboration focuses on encouraging students to be learners *at home and at school*. Positive family-school partnerships for children's learning are correlated with higher school achievement and positive indicators of school performance.

Important steps for establishing family-school partnerships involve attitudes, relationships, and actions that specifically facilitate home-school collaboration. Attitudes reflecting shared responsibility, recognizing and enlisting parents' expertise, and a solution-based orientation set the context for interactions between families and educators. Relationships with families result from these interactions and provide the impetus for families to feel welcome and motivated to work as partners with educators in addressing student needs. Finally, home-school collaboration actions put shared responsibility and decision making into practice by preventing and solving problems and enhancing children's learning across home and school. Fruchter, Galletta, and White (1992) concluded that effective programs differ in specific activities, but share four tenets: (a) parents are children's first teachers and have a lifelong influence on their values, attitudes, and aspirations; (b) children's educational success requires congruence between what is taught at school and values matched at home; (c) most parents care deeply about their children's education and can provide substantial support if given specific opportunities and knowledge; and (d) schools must take the lead in eliminating or at least reducing traditional barriers to parent involvement. However, schools could utilize these components and still have uninvolved families. When this occurs, educators need to examine their policies and practices—their attitudes toward and relationships with families—that set the context for collaborative actions.

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This inspiring, practical book describes the highly successful School Development Program (SDP) developed by Comer and initiated in the New Haven, Conn., school district in 1968. Since its initiation, the SDP has been implemented in more than 700 schools and has resulted in improved achievement of its students. The book describes three principles that guide the SDP: consensus, collaboration, and no-fault. The program involves three teams: the Parent Team, School Planning and Management Team, and Student and Staff Support Team, which carry out three operations: Comprehensive School Plan, Staff Development, and Assessment and Modification. The goal of SDP is described as child and adolescent growth along six developmental pathways: physical, psychological, language, ethical, cognitive, and social.

Hoover-Dempsey, K. V., & Sandler, H. M. (1997). Why do parents become involved in their children's education? *Review of Educational Research*, 67(1), 3–42.
Based on psychological theory and research, this insightful review highlights three constructs proposed as central for understanding why parents become involved in their children's education. Issues related to how parents perceive and construct their roles as parents, parental self-efficacy, and involvement messages from the school offer implications for both researchers and practitioners interested in enhancing family involvement.

Liontos, L. B. (1992). *At-risk families and schools: Becoming partners* (ERIC Document Reproduction Service No. EA 023 283). Eugene, OR: ERIC.
This 150-page manual is an excellent, readable synthesis of theory, research, and specific programs about home-

school collaboration for at-risk populations. Topics include communication, home as an educative environment, school readiness, home learning, and decision making. Particular emphasis is placed on early intervention, dropout prevention, and supporting and strengthening families. Elements of successful programs and information on reaching families are detailed.

National P. T. A. (2000). *Building successful partnerships: A guide for developing parent and family involvement programs.* Bloomington, IN: National Educational Service.

The six National Standards for Parent/Family Involvement Programs (Communicating, Parenting, Student Learning, Volunteering, School Decision Making and Advocacy, and Collaborating with the Community) provide the framework for this informative, useful book, of interest to anyone designing and evaluating parent involvement programs. Other resources include strategies for overcoming barriers and developing action teams, and reproducible position statements, surveys, forms, and worksheets helpful for developing family involvement programs.

29 Best Practices in Building Partnerships With Families

Graciela Elizalde-Utnick
Brooklyn College, City University of New York
Bilingual Psychological and Educational Assessment Support Center

OVERVIEW

It is widely accepted that collaboration between schools and families yields positive outcomes in a child's education. It is also widely recognized that parental support is pivotal for successful psychological interventions with children. The 1990s have seen a proliferation of written works filled with suggestions for collaboration and successful partnerships between families and schools. The importance of home-school collaboration is no longer questioned. The focus is currently on designing appropriate and successful partnerships that meet the needs of all parties involved—schools, families, and students.

In order to plan and implement effective and appropriate interventions, school psychologists need to work together with families. As part of their consultative role, school psychologists view parents and other caretakers as partners in the collaborative problem-solving process. In fact, since the late 1960s, G. M. Trachtman (personal communication, 1981) has made the very provocative claim that parents should be considered the primary clients of school psychologists, while children should be viewed as secondary clients. In his work as a school psychologist, Trachtman (1979) viewed the parent as "a valuable member of a team trying to help work out some problem for a child.... The parent was clearly seen as the person most concerned for, most responsible for, and most knowledgeable about the child" (p.384). There is no doubt that the child is always the school psychologist's client; however, the child is not the *only* one.

Accepting the premise that both children and their families are our clients, the school psychologist is in the very important position to strengthen the link between home and school. This chapter highlights best practices in building partnerships between families and schools. It provides (a) a definition of and rationale for home-school partnerships, (b) factors that influence the development of successful partnerships, (c) a framework for family-school partnerships; and (d) strategies for developing successful partnerships.

Partnerships between schools and families are conceptualized as a collaboration, in which there is "the establishment of a mutual goal or shared agenda between educators and parents to improve educational outcomes for students" (Christenson, 1995a, p.254). It includes but goes beyond fostering family involvement in the schools. Christenson, Rounds, and Franklin (1992) distinguish between parental involvement and home-school collaboration, noting that "parental involvement focuses on the parents' role in becoming involved in their children's education, whereas home-school collaboration focuses on the relationship between home and school and how parents and educators work together to promote the social and academic development of children" (p.21).

The empirical basis for developing family-school partnerships is strong. Extensive literature documents the benefits of parent participation on student achievement as well as student affective and social development (Henderson & Berla, 1994; Christenson et al., 1992). In addition to the effect of parental involvement on student outcomes, parent participation impacts on school personnel. Epstein (1996) found that teachers who reach out to parents are more accepting of and are more knowledgeable about families than those who hesitate to be involved with parents. Teachers who involve parents judge them more positively in terms of helpfulness and reliability. They also stereotype families less. In contrast, teachers who do not frequently involve parents rate less-educated parents and single parents as lower in helpfulness and follow through than other parents (Epstein, 1996).

Haynes and Ben-Avie (1996) note that through increased parental involvement, educators increase their knowledge of the sociocultural context of the families and communities they serve. Understanding the daily stressors, linguistic patterns, and how this sociocultural context can impact learning is likely to lead to an increased sense of teacher efficacy and improved classroom climate. Parents are also affected by their participation in school activities (Haynes & Ben-Avie, 1996). Involved parents learn ways to help their children and become motivated to further their own education.

Support for family-school partnerships is reflected in federal policies such as the Goals 2000 legislation. The introduction of the Goals 2000: Educate America Act gives more power to parents to influence the education of their children. It reads, "Every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children" (U.S. Department of Education, 1994, p.11). Other programs such as Title I require consultation and collaboration with parents. Many state and district policies also stipulate that programs must involve all parents and families (U.S. Department of Education, 1997). Furthermore, the 1997 amendments (P.L. 105-17) to IDEA address the participation of parents in the development of their child's program. These amendments require more parental involvement in the decision-making process (U.S. Department of Education, 1997).

Despite federal policy and the strong empirical basis for family-school connections, practices have lagged (U.S. Department of Education, 1997; Vaden-Kiernan & Chandler, 1996). Although progress has been made in some states, schools, and districts, family-school partnerships are not the norm (Christenson, 1995b). Epstein (1992) challenges school psychologists to take an active role in helping schools and families to connect and work together. Likewise, Christenson (1995b) broadly described the school psychologist's role, which is:

> to clarify rights, roles, and responsibilities between educators and parents for children's learning and to ensure that each child has opportunity to learn in his total learning environment—that is, home and school. It is time to share with parents the curriculum of the home. It is time to attend to family resources and to strengthen and support America's smallest school: the family (pp.129–130).

School psychologists must be change-agents in this collaborative process in order to improve life for all children, families, and educators.

BASIC CONSIDERATIONS

The development of partnerships does not happen overnight. It takes effort on the part of all stakeholders. In order to engage in this collaborative process with families, school psychologists must consider family-school partnership principles as well as factors influencing the building of such partnerships.

Family-School Partnership Principles

Family-school collaboration should be an on-going process beginning early in the child's life. It should stress shared goals, mutual efforts, communication, and mutual respect. A good example is the U.S. Department of Education (1997) Family School Partnership. The Family School Partnership confirmed that:

1. There is shared responsibility between the school and the home in order to provide students with a better education and a good start in life.
2. The schools will welcome families and reach out to them before problems manifest themselves.
3. The schools will help families to be included in the decision-making process.

4. The schools will organize tutoring and other such experiences to improve student learning.

5. Families will monitor student attendance, homework completion, and television watching and take the time to listen to and communicate with their children.

6. Families will engage in literacy experiences (e.g., reading to a young child) with their children.

7. Families will become acquainted with teachers and other school personnel.

8. Families will participate in the decision-making process.

9. There will be effective two-way communication between schools and families. This is accomplished by schools minimizing the use of educational jargon and breaking down cultural and language barriers, and by families maintaining contact with the schools.

10. There will be opportunities for families to learn how to help their children succeed in school and for school staff to work with families.

Given these principles, it is important for school psychologists to examine their current practices in order to reach out to all families. The formation of collaborative relationships between families and schools takes time, energy, and commitment. Furthermore, the process is complex in that there are a number of variables that influence the building of partnerships.

Variables Influencing the Formation of Partnerships

Most researchers suggest that parents and teachers can play a critical role in promoting children's education and school success if they work together (Christenson et al., 1992; Epstein, 1996; Henderson & Berla, 1994). Eccles and Harold (1996) point out that even though both teachers and parents think collaboration is important, neither is as involved as the other would like. Based on an extensive review of the literature, Eccles and Harold have identified a number of influences on collaboration between families and educators: (a) family characteristics and beliefs, (b) child characteristics, (c) school personnel characteristics and beliefs, (d) school characteristics, and (e) neighborhood characteristics. Time is also a variable, which affects both families and educators in the process of partnering with each other (Epstein, 1996; U.S. Department of Education, 1998). Figure 1 illustrates the relationship between these variables.

Family Characteristics and Beliefs

A number of family characteristics influence participation in the collaborative process, including education, financial resources (e.g., socioeconomic status, employment status, number of children), ethnicity and cultural background, minority status, and dominant language. Family beliefs include role of parents, comfort level with school, and knowledge of school policies and available services.

EDUCATION

Level of education is related to parent involvement. For example, better-educated parents are more involved in school and at home (Epstein, 1996). Research sponsored by the U.S. Department of Education (1998) found that less-educated parents had more difficulty helping their children with schoolwork, and this was a significant variable negatively affecting family involvement.

FINANCIAL RESOURCES

Poverty and related stressful life situations can interfere with the collaboration process. The poverty rate for the United States was 12.7% in 1998, with 34.5 million people living in poverty. Of this number, 13.5 million were children from birth to 17 years of age (U.S. Census Bureau, 1999). Poverty exists more often among racial/ethnic minorities. In 1998, the poverty rates for Hispanics and African-Americans were 25.6 and 26.1%, respectively (U.S. Census Bureau, 1999). Child care issues, difficulty with transportation, problems with housing, and dealing with government agencies are some of the factors that can make it difficult for parents to play an active role in education (Kelty, 1997). Employment status is a variable as well, since employed parents are less likely to be involved at school (Dauber & Epstein, 1989). Many working parents find it difficult to fit in

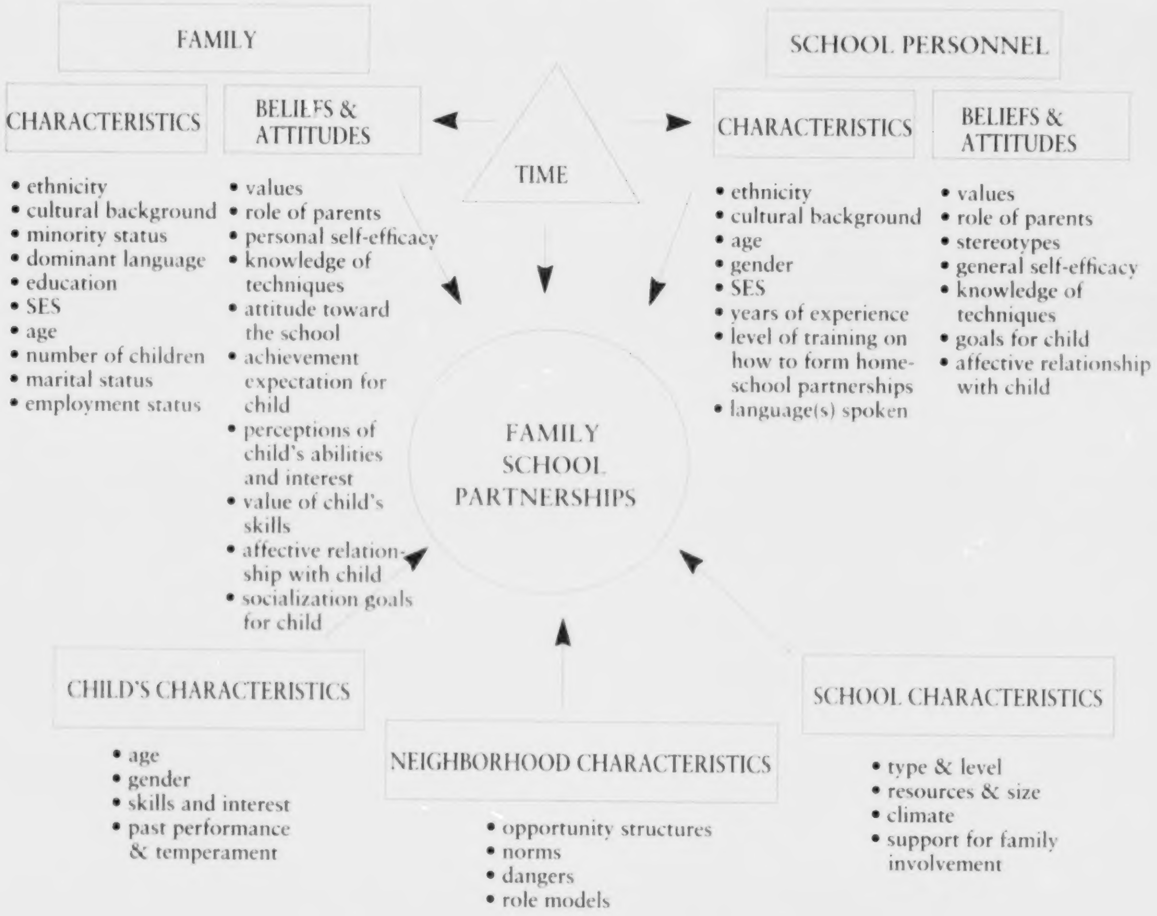
FAMILY
CHARACTERISTICS
BELIEFS & ATTITUDES
• ethnicity
• cultural background
• minority status
• dominant language
• education
• SES
• age
• number of children
• marital status
• employment status
• values
• role of parents
• personal self-efficacy
• knowledge of techniques
• attitude toward the school
• achievement expectation for child
• perceptions of child's abilities and interest
• value of child's skills
• affective relationship with child
• socialization goals for child
TIME
SCHOOL PERSONNEL
CHARACTERISTICS
BELIEFS & ATTITUDES
• ethnicity
• cultural background
• age
• gender
• SES
• years of experience
• level of training on how to form home-school partnerships
• language(s) spoken
• values
• role of parents
• stereotypes
• general self-efficacy
• knowledge of techniques
• goals for child
• affective relationship with child
FAMILY SCHOOL PARTNERSHIPS
CHILD'S CHARACTERISTICS
• age
• gender
• skills and interest
• past performance & temperament
NEIGHBORHOOD CHARACTERISTICS
• opportunity structures
• norms
• dangers
• role models
SCHOOL CHARACTERISTICS
• type & level
• resources & size
• climate
• support for family involvement

Figure 1. A model of variables influencing family-school partnerships (adapted from Eccles & Harold, 1996)

appointments during school hours. Furthermore, low socioeconomic status working parents often work long hours and have no control over their own schedules. This leads to limited (if any) time to engage in school activities.

CULTURAL DIFFERENCES

A cultural dissonance between the parents and the school critically affects parental involvement (Comer, 1994). Culture has been defined as a framework that guides behaviors in daily life (Anderson & Fenichel, 1989). It is important to note that even though individuals within a particular culture share similar characteristics and tendencies, they do not necessarily behave in the same way. Families and schools have their own scripts for living and a lack of congruence between these may be a key factor in school failure (Katz, 1991; Ogbu, 1993, 1994).

The Immigrant Experience. The customs and beliefs of culturally and linguistically diverse immigrants often conflict with those of the education system in the United States (Elizalde-Utnick, 1998). Huang and Gibbs (1992) note that school personnel must consider the following with respect to immigrants:

1. Immigrants might have differing cultural expectations of schools based on the educational traditions in their native country that may range from non-involvement to total parental involvement.

2. For some immigrants, cultural expectations of teachers differ, with teachers representing the ultimate authority for educating children; thus, such parents would have learned not to interfere in their child's education. Furthermore, such a parent would not understand his or her role in the collaborative problem-solving process.

3. Some immigrants from war-torn countries, or from rural and/or underdeveloped countries might not have much, if any, experience with schools.

4. Linguistic barriers often exist for immigrant families, and such barriers work against the collaborative process. Even if there is comprehension of the English language, they are often reluctant to speak the language.

5. Immigrants often work long hours and have limited time for school involvement. While one cannot assume that working immigrants do not have time for school involvement, time is nevertheless a critical variable.

6. Undocumented immigrants might be fearful of becoming involved with mainstream institutions due to their immigration status. Such immigrants might fear that information regarding their current status might be given to the Department of Immigration and Naturalization Services.

7. Traditional parental involvement activities, such as PTAs or parenting workshops, might be foreign to immigrant parents. Some parents do not understand that their involvement is both desirable and appropriate.

In addition to these possible variables affecting family involvement, school psychologists should note that close-knit families that prefer to resolve problems within the boundaries of the family would view the professional as an outsider (Kalyanpur & Harry, 1999). While it is important to be sensitive to cultural differences, it is detrimental to generalize and stereotype a particular behavior to all members of a particular culture. Acculturation factors must be considered when attempting to partner with culturally diverse families (Elizalde-Utnick, 1998).

MINORITY STATUS

When trying to establish partnerships with culturally diverse families, school psychologists should be aware of the well-documented literature regarding *minority status*. Ogbu (1994) distinguished between different types of minority status: immigrant, or voluntary minorities, and involuntary minorities. Immigrant or voluntary minorities have moved to a new country for a better life (for economic reasons and/or for freedom), whereas involuntary minorities are defined as people who were originally brought into the United States or any other society more or less permanently against their will (e.g., through slavery, conquest, colonization, or forced labor).

Immigrants as well as involuntary minorities encounter economic and social barriers. Both minority groups encounter interpersonal and intergroup problems in society and school because of cultural and linguistic differences (Ogbu, 1994). Ogbu (1993) found that many involuntary minorities appear to have developed a deep distrust for the public schools, which interferes with their involvement in the schools. Immigrants have been found to be better able to overcome their difficulties. Such ability to cope is attributed to the immigrants possessing a *dual frame of reference* (Ogbu, 1994). Immigrants typically compare current experiences with prior ones back in the country of origin and often conclude that they are better off in the new country. Unlike immigrants, involuntary minorities do not have a "homeland" with which to compare, and, therefore, do not see their situation as temporary. Involuntary minorities tend to interpret the discrimination against them as permanent, institutionalized, and omnipresent (Ogbu, 1994).

While it is important to consider minority status as an intervening variable, stereotyping all individuals based on the voluntary-involuntary dichotomy would undermine the collaborative process. One cannot always say that it would be difficult to involve parents from involuntary minority groups. However, school psychologists should be aware of possible perceptions when interacting with such parents. Likewise, it is not always easy to involve immigrant parents. Immigrant parents, especially if they themselves have little formal education and lack proficiency in the dominant language, are hesitant to intervene in school affairs (Gibson, 1991). Families more familiar with the educational system are more likely to become involved.

LINGUISTIC DIFFERENCES

Language often serves as a barrier between linguistically diverse parents and schools (U.S. Department of Education, 1998). Extensive clinical research documents the need to consider linguistic variables when working with families who speak a language other than English. Bilingual clients who are in counseling often communicate different clinical information depending on the language used during the initial evaluation (Santiago-Rivera, 1995). Marcos (1988) demonstrated that linguistically diverse clients who try to speak English might be more concerned with how to speak correctly than with communicating therapeutically relevant information.

Since language plays such a critical role, school psychologists need to consider how work with interpreters may promote collaboration or the opposite—increase the school psychologist's distance from the family. Even though the use of interpreters should facilitate communication with linguistically diverse families, the presence of an interpreter may interfere with the establishment of rapport (Esquivel & Keitel, 1989). Therefore, it is suggested that when using an interpreter, the school psychologist should be the one that sits closest to the parent. This way, the parent-psychologist partnership develops more naturally rather than that of the interpreter and parent. By not paying attention to these interaction patterns, a lengthy dialogue might occur between the parent and interpreter, inadvertently leaving the school psychologist out of the conversation. Lopez (1995) cautions that the use of interpreters "adds another layer to the complexity of delivering intervention services, complicates issues of confidentiality and trust, and can create barriers in the communication of affect and in the establishment of the working alliance so necessary to the process of working with children and families" (p.1119).

FAMILY'S ATTITUDE TOWARD THE SCHOOL

Families bring different attitudes into the family-school relationship. Families' comfort level with the school is a critical variable in home-school collaboration (Young, 1998). Kelty (1997) found that Hispanic parents rated personal contact with the school prior to an event as the most important element in making them feel comfortable. A parent's sense (or lack thereof) of ownership over the school has also been found to be a decisive factor in parent involvement. Negative views of the school and past negative experiences with education can be barriers to the collaborative process (Chavkin & Gonzalez, 1995; Harry, 1992). Teachers' and other school professionals' communications with families influence parents' feelings of comfort with the school, which then influences parents' involvement in their children's learning (Christenson, 1995b).

Child Characteristics

Families vary their involvement depending on characteristics of the child (Eccles & Harold, 1996). Age is a significant consideration when analyzing child characteristics. Parental involvement is greatest during the earlier years, with dramatic drops as children enter middle school. Eccles and Harold (1996) point out that the trend toward decreased parental involvement as children move into adolescence might reflect the parents' decrease in feelings of efficacy. As children enter the secondary years, schoolwork becomes more advanced, possibly causing parents to feel less confident about their ability to help their children with homework. Eccles and Harold have also found that parents believe they are more influential when their children are younger.

In addition to age, a child's experiences as well as personality variables come into play. Parents become involved more on their own if their children are doing well in school (Epstein, 1996; Eccles & Harold, 1996). The affective relationship between parent and child also affects the degree of involvement in school activities. Parents are more likely to try to help a child with whom they get along than with a child with whom they are having conflicts (Eccles & Harold, 1996).

School Personnel Characteristics and Beliefs

School personnel bring their own characteristics, beliefs, and attitudes into the collaborative process, thereby facilitating or inhibiting it (Eccles & Harold, 1996). For instance, the school psychologist's beliefs, which are embedded in his or her own cultural framework, might be reflected in professional practice. Attitudes about parental involvement can also affect the collaborative process. Like parents, many teachers believe that it is better for adolescents to have less parental involvement (Epstein, 1996). This is particularly the case in minority and low-income neighborhoods where parents are seen as part of the problem instead of a resource (Comer, 1994).

Level of training on how to form family-school partnerships is a critical variable. In an examination of parent involvement activities in public elementary schools during the 1995–1996 school year, the U.S. Department of Education (1998) found that 48% of school personnel indicated that a lack of training in working with parents was a significant barrier.

School Characteristics

School factors are a major influence on parental involvement. Parents are more involved in their children's education when they feel that schools are doing things to involve them (Epstein & Dauber, 1991). School climate and support for family involvement are critical variables (Berger, 2000).

The physical and organizational structure of the school buildings is likely to facilitate or hinder the collaborative process (Eccles & Harold, 1996). For instance, school size typically increases dramatically as children move from elementary to secondary grades. The higher level schools are often departmentalized resulting in less personal contact. Eccles and Harold (1996) note that changes such as these can increase a family's sense of alienation from the school.

Neighborhood Characteristics

A neighborhood's characteristics, such as resources and opportunities, level of cohesion, and role models, can affect family involvement (Eccles & Harold, 1996). Safety in the area after school hours is considered to be a barrier in schools with poverty concentrations and minority enrollments of 50% or more (U.S. Department of Education, 1998). Families living in high-risk neighborhoods with few resources tend to utilize in-home management strategies to assist their children and often focus on protecting their children from the dangers of their neighborhood (Eccles & Harold, 1996).

Time

Time is a barrier affecting both families and school personnel. The U.S. Department of Education (1998) found that lack of time on the part of schools (56%) and on the part of parents (87%) negatively impacts the collaborative process.

BEST PRACTICES

School practices to engage families are strong predictors of family involvement (Epstein, 1996). Epstein developed a well-researched framework of collaboration and family involvement, whereby schools work with families and communities to help them be informed and involved in children's education at school and at home:

1. *Parenting*: Provide parents with the skills and knowledge needed to help their children at each age level. This includes parenting and child-rearing skills, family support, and understanding child and adolescent development.

2. *Communicating*: Communicate with families through notes, telephone calls, conferences, e-mail, and other types of two-way communication.

3. *Volunteering*: Include parents as volunteers and assistants in the classrooms and other areas of school.

4. *Learning at home*: Teach parents to monitor and discuss homework and provide learning activities at home.

5. *Decision making*: Involve parents in decision making, as well as in governance and advocacy.

6. *Collaborating with the community*: Utilize resources in the community to strengthen families, school programs, and student learning and development.

In 1997, the National PTA adopted Epstein's six dimensions of involvement as the National Standards for Parent/Family Involvement Programs to help schools, communities, and parenting groups implement effective parental involvement (Sullivan, 1998). In this same year, the National Association of School Psychologists (NASP) established the National Mental Health and Education Center for Children and Families, which functions as an information and action network to foster best practices in education and mental health for children and families. The Center promotes collaborative efforts and effective strategies by providing resources to parents, teachers, and others working with students and their families.

Strategies for Successful Family-School Partnerships

Best practices involve regarding families as partners in the education of students. Strategies to facilitate this collaborative process include: (a) needs assessment, (b) effective communication, (c) perspective-taking, (d) an accepting school atmosphere, and (e) family involvement activities.

NEEDS ASSESSMENT

One way to improve the relationship between home and school is to conduct a needs assessment or survey to determine what families desire (Berger, 2000). Surveying families early in the school year reveals what families need and suggests ways that the school can foster participation. Families' interests and needs can be ascertained through a brainstorming session, in which all participants contribute ideas for programs. However, some families might be hesitant about making suggestions in a public or group setting. Therefore, anonymous questionnaires can be quite useful. Another vehicle, the suggestion box (Berger, 2000), gives families the opportunity to drop off questions and suggestions throughout the school year. (See Nagle, this volume, for a thorough discussion on needs assessment.)

EFFECTIVE COMMUNICATION

Effective communication is at the core of partnerships between families and schools (Jesse, 1997). Epstein (1996) poignantly makes this case: "From my view, the main goal of partnerships is *to develop and conduct better communications with families across the grades in order to assist students to succeed in school*" (p.213). In fact, frequent and effective communication with families is "as important a part of the school psychologist's job as assessing students and consulting with teachers" (Wise, 1995, p.279).

Two-Way Communication. Effective communication is conceptualized as two-way communication between the home and school (Chavkin & Gonzalez, 1995). In this manner, school psychologists and educators seek information from families as well as provide it to them. Turnbull and Turnbull (2001) go beyond two-way communication, suggesting that communicating among partners can involve three-or-more-way communication, as it occurs in Individualized Education Program (IEP) team meetings.

Communication can take the form of telephone calls, visits to the classroom, or visits to the school psychologist's office. It is important to communicate when good things are happening, not just during crises. While two-or-more-way communication is preferable, schools can provide information through one-way communication vehicles (Berger, 2000):

1. *Newsletters:* Newsletters inform parents about the school's plans and activities. Berger (2000) notes that the use of newsletters is an excellent curriculum tool, since students can write and edit articles.

2. *Notes:* Notes written by school psychologists and educators can update families on student progress and areas of concern. It is important to write notes in a positive manner.

3. *Suggestion box:* When placed in the school hallway, a suggestion box allows families to share thoughts anonymously with school personnel. By posting the comments and replies, this one-way form of communication can be transformed into two-way communication.

4. *Handbooks:* Handbooks can be a rich resource filled with information regarding the school's expectations for students and families. Handbooks can provide information, such as (a) the school's mission statement, (b) discipline policy, (c) procedures (e.g., student progress reports and grades), (d) special school programs (e.g., after-school activities), (e) family involvement practices, and (f) a calendar of school events, including closings, report card periods, parental involvement activities, and open houses (Moles, 1996).

It is important to remember that families have different needs. For example, some parents might only need information (e.g., a newsletter) while others might need information as well as consultation. And, yet, other families might need on-going support (e.g., parenting workshops) (Christenson, 1995b).

In addition to communicating with families, it is important for school psychologists to consult with teachers and other school personnel regarding two-way communication. Through consultation, school psychologists can broaden teachers' views of family involvement; that is, that there are many ways families become involved, both at home and in school. Smith et al. (1997) found that teachers who perceive supportive home and school environments are more likely to engage in strong family involvement activities. School psychologists can help teachers develop more effective methods of communicating with families as well as help teachers develop home learning activities that will foster parent involvement.

Personal Approach. Families often prefer informal communication to formal communication (Turnbull & Turnbull, 2001). However, it is important for school psychologists to consider individual families' preferences in the same way IEPs are individualized for students. By using a more personal approach it not only facilitates communication with many families but also helps diminish the sense of alienation that some parents might be experiencing. Harry (1992) suggests that when attempting to establish partnerships with parents there should be an emphasis on developing individual relationships and providing one-on-one communications, rather than communicating in large-group settings. If large group meetings (e.g., parenting workshops) are the norm, then parents (e.g., those interested in discussing personal examples emanating from the group discussion during the meeting) can be spoken with individually after the meeting.

When providing information relating to the referral, evaluation, and placement of students, face-to-face meetings are better than providing the information solely in writing. Letters should be limited, since the sender is neither seen nor heard. The use of jargon should be avoided, unless absolutely necessary. This author has worked with many illiterate parents for whom letters and other printed material are meaningless. Therefore, oral presentation of information is not only more personal but more comprehensible and effective for those parents with limited education.

Accounting for Linguistic Diversity. Effective communication includes culturally sensitive outreach efforts (Chavkin & Gonzalez, 1995). In order to reduce the language barrier, information, both oral and written, must be provided in the family's preferred language. Ideally, the school psychologist would be the person communicating directly with a linguistically diverse family member (see National Association of School Psychologists (2000) for a directory of bilingual school psychologists, listed by language and state). However, the shortage of bilingual school personnel has lead to the use of interpreters. It is important to keep in mind the potential problems (e.g., maintenance of confidentiality, delivery of accurate information) associated with the use of interpreters (Lopez, 1995). Children should not be used as interpreters, since it places unfair responsibility on the child to communicate and mediate with adults on behalf of his or her parents (Harry, 1992). Furthermore, a child often does not possess high levels of proficiency in both languages, particularly in the use of technical vocabulary. (See Lopez, this volume, for a thorough discussion on the use of interpreters.)

PERSPECTIVE-TAKING: THE RESPONSIVE SCHOOL ENVIRONMENT: A POSTURE OF CULTURAL RECIPROCITY

A responsive school environment is one which enables children to succeed while providing enough continuity that the children do not feel as if they are entering "foreign territory" (Berger, 2000). Berger adds that "the school should be culture-sensitive and respond positively to the language and culture of the home" (p.24). Harry, Kalyanpur, and Day (1999) note that "professionals who are hoping to make a difference for children must be willing to take the initiative in building a bridge between the cultures of diverse families and the culture of schools" (p.7). To do this, school psychologists should initiate a two-way process of information sharing and understanding, a process that can be truly reciprocal and lead to genuine mutual understanding and cooperation. School psychologists, as consultants, already engage in this kind of two-way communication process.

Bianco-Mathis and Veazey (1996) found that the best consultants seem to possess an internal drive to make a difference in the lives of others. But Dougherty (2000) goes farther, noting that, in addition to an internal drive and good consultation skills, effective consultants must have a "personal and professional growth orientation" (p.24). A personal growth orientation involves the consultant's willingness to grow and change as a person. A professional growth orientation refers to the consultant's participation in professional development activities (e.g., professional conferences, staff development workshops) that enhance his or her consultation skills.

One way to grow personally and professionally as well as to establish effective communication is to follow the posture of cultural reciprocity. This involves a multi-step sharing of perspectives between families and school psychologists in order to understand each other. Kalyanpur and Harry (1999) suggest that:

> Professionals [should] adopt this approach whereby they engage in explicit discussions with families regarding differential cultural values and practices, bringing to the interactions an openness of mind, the ability to be reflective in their practice, and the ability to listen to the other perspectives. Furthermore, they must respect the new body of knowledge that emerges from these discussions and make allowances for differences in perspective when responding to the family's need (p.118).

Key Features. The key features of the posture of cultural reciprocity (Kalyanpur & Harry, 1999) are:

1. *Has universal applicability*: The basic construct, communication, involves listening to and respecting multiple perspectives.

2. *Avoids stereotyping*: Avoids the trap of stereotypical solutions by investigating each situation as unique. Families may have differing reasons for the same behavior.

3. *Ensures that both families and professionals are empowered*: The posture of cultural reciprocity enables all parties to engage in a dialogue where each learns from the other.

4. *Goes beyond awareness of differences to self-awareness*: The acknowledgment of difference in perspective is insufficient without nonjudgmental realization of the worldview behind it.

5. *Aims for subtle levels of awareness of differences*: Thus, culturally sensitive strategies that respond to stereotypes, although useful, are insufficient. So, too, are strategies based on more specific knowledge of the families' values but without understanding of the family's point of view. It is critical to understand the assumptions that underlie our practices.

Steps for Developing a Posture of Cultural Reciprocity. Harry et al. (1999) outline the following steps for developing reciprocal relationships with families:

- *Step 1:* Identify the cultural values embedded in your professional practices. For instance, what cultural values are implicit in your interpretation of a student's difficulties or in the recommendation for service? Example: Individuality and independence might be values embedded in your personal and professional identities.

- *Step 2:* Find out whether the family being served recognizes and values these assumptions and, if not, how their view differs from yours. Example: While you might value independence, the family might value interdependence (a value consistent with many non-western cultures (Greenfield, 1994)).

- *Step 3:* Recognize and give explicit respect to any cultural differences identified, and fully explain the cultural basis of your assumptions. For instance, by explaining to a family that your recommendation is rooted in the cultural value of independence, you are offering information about mainstream cultural values. Furthermore, by asking the family for their perspective, you are acknowledging that your cultural beliefs are not the only way to view the world.

- *Step 4:* Through discussion and collaboration, determine the most effective way of adapting your professional interpretation or recommendations to the family's value system.

The posture of cultural reciprocity applies to all families, regardless of whether they are culturally diverse. As Harry et al. (1999) note, "by developing a posture of cultural reciprocity ... you can ensure that every interaction with a family will be a learning experience for both you and the family and that any assistance that you offer will be within the realm of what is valued and feasible for that family" (p.12).

Case Example. Ms. Torres approached the school psychologist because she is having difficulty managing her 15-year-old daughter's behavior. Ms. Torres, a Dominican, single parent, immigrated with her daughter to the United States 10 years ago. For the last 6 months she and her daughter, Claudia, have been arguing frequently about Claudia's friends and the amount of time she is spending with them. Claudia is very angry at her mother's restrictions. She is not allowed to socialize with her school friends after school hours. She is supposed to go straight home after school. During a session with Claudia and her mother, Claudia indicates that she wants her mother to back off and leave her alone. In response her mother declared that Claudia has become "too Americanized," is only interested in herself, and shows very little interest in her family. How should the school psychologist respond? What are the issues involved in the conflict between mother and daughter?

The school psychologist might interpret this situation in terms of the parent-adolescent relationship. From a developmental perspective, we know that early adolescence is a time when conflict with parents escalates. This increase in conflict is often attributed to a variety of factors, including biological changes in puberty; cognitive changes, involving logical reasoning and increased idealism; and changes related to individuation and identity development (Santrock, 1999).

Putting developmental issues aside for the moment, this case can also be analyzed from a cultural value perspective. Applying the posture of cultural reciprocity, the school psychologist should look at each member's cultural point of view, including his or her own. Claudia is demanding greater freedom, which reflects the American value of individualism. Individualism, or independence, is characterized by individual initiative and emotional independence (Triandis, 1995). In contrast, Ms. Torres' demands reflect her cultural value of familism, which places importance on the family over individual needs (Paniagua, 1998). Familism is consistent with collectivism, or interdependence, which is held by about 70% of the world's population (Greenfield, 1994; Triandis, 1995). Collectivism is characterized by a collective identity, emotional dependence, group solidarity, and group decisions. Ms. Torres expects her daughter to put the family over her own individual needs and friends. When she accuses her daughter of being "too Americanized" she is revealing something that many immigrant parents experience with their adolescent children: As their children assimilate to the culture of the United States, perceived changes are often considered threatening to the family's culture. When individuals move to a new country, their cultural values move with them (Greenfield, 1994). Furthermore, immigrants from collectivist cultures (such as Ms. Torres) often hold on tightly to their cultural values because they are trying to preserve their culture.

By looking at each individual's cultural perspective, each value is understood to be adaptive within its social context. But what about the school psychologist's perspective? Why would it make a difference? The school psychologist might firmly believe that Claudia should be individuating and that Ms. Torres should be learning to let go. After all, peers become very important during adolescence, as the adolescent searches for his or her identity. But does this not reflect the cultural value of individualism? School psychologists must be sensitive to different world views and understand them in context. By focusing on cultural differences, the conflict between Claudia and her mother shifts from each one blaming the other to focusing on the acculturation process, which places different demands on the adolescent and mother.

Therefore, in this case, it would be very helpful for the school psychologist to discuss each individual's perspective in terms of culture and the acculturation process. That is, Ms. Torres can come to understand that Claudia is assimilating to the culture of the United States, which places importance on the individual's needs. Furthermore, during adolescence peers become very important. Likewise, Claudia can come to understand her mother's perspective; that is, that her mother is not necessarily trying to exert authoritarian control, but rather out of love and the value of familism Ms. Torres wants to spend time with her and expects Claudia to want the same thing. Once the two understand each other's perspective, they might be able to reach a compromise. The school psychologist can be the link in this collaborative process.

ACCEPTING SCHOOL ATMOSPHERE

A school's climate can enhance or detract from the process of collaboration between families and school psychologists. Berger (2000) describes how schools differ in spirit, either welcoming parents in or, alternatively, maintaining a separatist stance:

> Each school differs in its character (usually set by the administrators) and reflects the morale and attitudes of the personnel. Some say, "Come, enjoy with us this exciting business of education." Others say, "You are infringing on my territory. Schools are the professional's business. Send us your children. We will return them to you each evening, but in the meantime, let's keep to our own responsibilities." In the first instance, there is joy in the educational spirit. In the second, fear and avoidance are dominant. (p.146)

The process of forming partnerships between families and school psychologists necessitates an open-door policy on the part of schools. Furthermore, an open-door policy is more of an attitude than a series of activities (Berger, 2000). For example, the attitude of school personnel is reflected in the welcome or unwelcome greeting in the hall or in the individual's body language.

Schools should also be sensitive to families' schedules and work to provide flexible scheduling of meetings and events that include families. Furthermore, schools that make connections with community resources can help involve families as well as meet other needs within families so as to promote healthy development in children (Smith et al., 1997).

FAMILY INVOLVEMENT ACTIVITIES

The following school activities and resources foster family involvement.

1. Parenting and learning at home
   - Conduct a series of parenting and parent education workshops on a regular basis (e.g., monthly or biweekly). Cover relevant topics related to child development, behavior management, development of literacy, and teaching math and science. *The information should be conveyed in the family's preferred language.*
   - Advertise the workshops through flyers, which have an RSVP section (to be sent in with the child or in an enclosed stamped, self-addressed envelope). Information can be posted on the Internet. Flyers for future workshops should also be disseminated to workshop participants.
   - Increase attendance at workshops by providing the following services to families who need such support (particularly those families who could not otherwise attend):
     a. Transportation assistance (either by providing the actual means of transportation—e.g., school bus—or by providing the round-trip fare)
     b. Child care assistance (either by providing day care for preschoolers, and/or providing an area—within the same room where the workshop is being conducted—with toys for young children to play)
   - Provide refreshments for workshop participants and their young children (e.g., coffee, tea, juice, and donuts). The presence of refreshments fosters a personal, social atmosphere. Participants often remain after the workshop is over in order to converse with each other and the presenter, as well as enjoy the snacks provided.
   - Create handouts and school-home activity packets in the family's preferred language and give them out to all families, not just those who attend the workshops. The handouts can be posted on the Internet.
   - Create a lending library of materials for use at home (e.g., parenting books, magazines, and videos; children's books; educational toys; teaching aides, such as paper-and-pencil literacy enhancing tasks). Again, the materials should be available in the family's preferred language.

2. Communicating
   - Establish personal contact with families.
   - Establish a structure and routine for discussing student progress.
   - Provide printed material (e.g., flyers, pamphlets, and home-school handbooks) regarding meetings and school events. Information can be posted on the Internet. However, follow-up calls are helpful. Information can also be disseminated at events such as back-to-school nights and open houses.
   - Provide information (via print material and personal contact) in the family's preferred language.
   - Establish procedures for two-way communications. For example, a notebook kept in the

child's backpack can be utilized for family-to-educator and educator-to-family communication.
- Implement effective and frequent communication about homework.
- Provide information to parents about course requirements, grading processes, curriculum-related decisions, and other pertinent issues.

3. Volunteering
   - Establish an effective volunteer program, which includes both recruitment efforts and training.
   - Sponsor events and activities that promote family involvement at all levels of development and implementation, such as fairs, carnivals, shared reading, and school projects. Parents are resources that can be used in events such as career day or talent sharing.

4. Decision making
   - Establish a structure and process to include families in decision making.

5. Collaborating with the community
   - Establish a structure for business-school and/or community-school partnership events to enrich school programs and students' experiences.
   - Provide families with information about community resources. For example, create and disseminate a directory of resources in the community. Information can be mailed out to families, sent home with their children, given out at meetings, and/or posted on the Internet.

Case Example. The Family-School Partnership Project (Elizalde-Utnick, 2000) was developed to increase family involvement and home-school communication at Children's Center for Early Learning, a special education preschool and early intervention site in Brooklyn, New York. The school is located in an ethnically diverse, urban community with a student population consisting of 60% Hispanic and 40% African-American or Afro-Caribbean youngsters, ages 0–5, with mild to moderate disabilities or developmental delays. The Project's components include a lending library, parent education workshops, monthly newsletters, individual consultation with parents and other family members, and consultation and collaboration with school staff.

Parenting workshops are offered twice per month, alternating between two themes: behavior management/social-emotional functioning and the development of pre-literacy skills. Parents can also request a topic. Handouts and the monthly newsletter are written in both Spanish and English. The lending library consists of children's books and audiotapes of children's books and songs in both Spanish and English. Families are also given pre-literacy paper-and-pencil tasks (e.g., picture vocabulary cards, vocabulary-building games, sequencing activities) to be used at home. The lending library and pre-literacy materials are made available to teachers and therapists to enhance home-school collaboration. This way, school staff can follow-up with families and discuss the use of these materials in the home and at school.

The Project is evaluated on an on-going basis. Furthermore, a self-study evaluation team was created, consisting of two teachers, the principal, the clinical director, a parent, two New York State Education Department officials, and a local school district CPSE (Committee on Preschool Special Education) administrator. Evidence of project effectiveness includes the remarkable number of workshop participants, including parent cohorts, extremely positive workshop evaluation forms, an increase in the number of materials borrowed from the library; an increase in the number of parents taking their children to the public library, and an increase in the number of parent-staff communications. Furthermore, the parents report generalization of learned skills to the home (e.g., effective limit-setting, establishment of routines, reading to children during the day and at bedtime). The children also provide valuable feedback, as many report parents reading books and playing audiotaped children's songs at home. The teachers and therapists have reported improvement in children's behavior (e.g., increased ability to control impulses, follow directives) and attribute this improvement to on-going collaborations with families. It seems that a partnership has grown between families and the school, which has yielded very positive results for all.

SUMMARY

The purpose of this chapter was to describe the key elements for developing partnerships between families and schools. The importance of family-school collaboration is rooted in the positive outcomes for all stakeholders (e.g., students, families, schools, and communities). Family-school partnership principles and variables influencing the formation of partnerships were described. The current conceptualization of practice regards families as partners in the education of students.

In order to partner with families, school psychologists should (a) adopt a posture of cultural reciprocity, (b) provide families with the skills and knowledge needed to help their children, (c) engage in two-way communication with families, (d) include family members in school activities, (e) guide families so they could help students complete homework and learn at home, (f) include parents in governance and advocacy, and (g) utilize resources in the community to strengthen families, school programs, and student learning and development. Strategies for successful family-school partnerships were described and include effective communication and perspective-taking. With commitment, mutual respect, shared goals, and joint effort, families and schools can work together toward achieving success for all students.

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This volume is based on the presentations and discussions from a national symposium on family-school links held at Pennsylvania State University and brings together psychologists, sociologists, educators, and policy makers investigating the bidirectional effects between families and schools. The Epstein (1996) and Eccles and Harold (1996) articles cited in this chapter can be found in this book.

Christenson, S. L., & Conoley, J. C. (Eds.). (1992). *Home-school collaboration: Enhancing children's academic and social competence.* Silver Spring, MD: National Association of School Psychologists.

This is an excellent resource filled with information to facilitate the home-school collaboration process. The content includes theoretical and empirical bases for developing partnerships, a variety of models and programs, and practical approaches for use with different populations.

Kalyanpur, M., & Harry, B. (1999). *Culture in special education: Building reciprocal family-professional relationships.* Baltimore: Brookes.

This thought-provoking book describes the potential impact of embedded and often unrecognized cultural assumptions that influence interactions between families and educators. Personal anecdotes, case examples, and theoretical discussions are included.

Moles, O. C., & D'Angelo, D. (1993). *Building school-family partnerships for learning: Workshops for urban* *educators*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement. This resource gives educators strategies for developing family-school partnerships. It contains five staff development workshops to be implemented in elementary and middle schools. Despite the content being focused on urban educators, it is appropriate for use in all schools, including those in rural and suburban areas.

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The National Mental Health and Education Center for Children and Families provides free or low cost resources that address a wide range of issues, including collaboration. The Center also offers information referrals, web links, and access to relevant materials from other organizations in order to facilitate improved communications and collaboration. For materials or further information, the Center can be contacted by e-mail at center@naspweb.org or on the web at www.naspweb.org/center.

30 Best Practices in Facilitating Collaborative Family-Teacher Routine Conferences

Harleen S. Vickers
Kathleen M. Minke
Kellie J. Anderson
University of Delaware

OVERVIEW

In most schools, there are relatively few structured opportunities for parents and teachers to meet during the school year. There are even fewer opportunities for meetings focused specifically on one child. The traditional "routine" parent-teacher conference, scheduled two or three times per year, remains the primary venue through which parents and teachers can develop working relationships that benefit students. However, despite sweeping changes in the larger society (e.g., increasingly complex family structures, greater ethnic and cultural diversity among families), conference methods have barely changed in modern times. Although educators acknowledge that children are more likely to be successful when their interacting environments have mutual regard, supportive communication, and congruent expectations (Bronfenbrenner, 1986), typical conference procedures actually preclude pursuit of these goals.

The prevailing pattern in many schools goes something like this: two or three times a year parents (usually mothers) are asked to come to school to discuss their children's progress. But rarely is there an expectation of an actual discussion. Instead, parents, teachers, and students tend to define the conference as a time for teachers to share their expertise with parents who will listen. Given the importance of the subject matter (student academic progress) and given that the parents and teacher are usually not well acquainted, all parties may approach the task with trepidation. Parents may envision the teacher telling them everything that is wrong with their child and, by extension, them as parents. They may feel defensive and intimidated. Teachers may be equally nervous, wondering if the parents will ask a question they do not know how to answer or if the parent will blame them for the child's lack of success. In this unidirectional process, the teacher talks, the mother listens, and the child stays home hoping the news is not too bad. The mother usually promises to help more at home, and in 15 minutes it is time for the next mother. Rather than developing effective working relationships, these kinds of conferences may result in greater distancing between parents and teachers (Swap, 1993).

Despite admonitions for teachers to create partnerships with parents (National Educational Goals Panel, 1994), this typical conference structure allows virtually no opportunity for parents and teachers to get to know each other or to work together to help the student succeed. Rather, the conference is a highly ritualized encounter that is intended to demonstrate mutual interest in the child and to minimize opportunity for conflict (Swap, 1993). The limited time allotted for conferences serves to keep interactions at a superficial level. Indeed, "in what other circumstance would one allow only 15 minutes to share a significant amount of information about a situation of deep mutual concern with a virtual stranger" (Swap, 1993, p. 20)? However, it is true that time is among the most scarce and precious resources in schools. And although it is important to advocate for increased time for parent conferences, it is equally important to critically examine how we use the time we already have.

School psychologists are in an excellent position to influence change. This chapter offers ways that, as consultants and trainers, they may provide teachers with alternatives to time-honored, yet often unproductive, methods of communicating with parents at conference time. We review two different approaches to parent-teacher conferences: teacher-led conferences and student-led conferences. Both styles emphasize a substantial role for children in the conferences, although the styles differ significantly in roles played by teachers and parents. These conferences encourage children's responsibility for their own learning as a path to increasing their motivation and achievement (Ames, 1992). The desired outcome is to have families and teachers working together in a collaborative partnership to create a context for student success. These alternative methods are currently being used in schools without substantial increases in the time allotted for conferencing.

The chapter is designed to assist school psychologists in creating their own in-service (or pre-service) training activities for teachers. It addresses only routine parent-teacher conferences. Although some of the information presented applies to other kinds of conferences (e.g., IEP and problem-solving meetings), those conferences entail additional skills and issues not discussed here. The reader should note that improving routine conferences is only one small piece of what should be a larger, coordinated set of interventions designed to improve family-school collaboration (see Minke, 2000; Christenson et al., this volume). However, changing the conference style of even a small group of teachers can have far-reaching effects for students, families, and other teachers.

BASIC CONSIDERATIONS

This section describes foundational knowledge that teachers must have to conduct more effective routine conferences. This knowledge is derived from systems theory, solution-focused approaches to problem-solving, and basic counseling skills. Many school psychologists are already familiar with this material; those who are not should complete additional reading or training prior to developing training for teachers. Because these conference styles are not simply "recipes" to follow, teachers must understand conceptual underpinnings of the approach. In this way, when unexpected events occur during conferences, teachers' responses flow easily from their conceptual knowledge. When training teachers to conduct alternative conferences, we directly teach the information in this section.

Thinking Systemically

There is a rich and varied literature available that describes how systems theory can be applied to families and schools (e.g., Bronfenbrenner, 1986; Pianta, 1999). Of the many concepts that could be introduced, two are of primary importance: wholeness and patterned interaction.

Living systems, whether individuals, families, or classrooms, are organized entities that cannot be understood by simply examining contributions of individual members; that is, the whole is indeed greater than the sum of its parts. Consider a teacher who says: "Individually, they are all nice kids, but when you put them together, something happens; they are just a MESS!" This teacher is experiencing the system's concept of wholeness. Each individual and the group as a whole affects, and is affected by, the behavior of every other member. When a member is added, subtracted, or changes behavior in some way, the entire system has to reorganize to accommodate to the change. This concept is important because schooling is an act of bringing children from one system, the family, and asking them to function in a new system or set of systems, classroom and school. This creates a new, larger order system: the family-school mesosystem (Bronfenbrenner, 1986), with an increasingly complex set of rules, expectations, and roles for children that may or may not be the same across settings. By thinking about the whole rather than individual parts, teachers are invited to consider not just how the parent or child contributes to interactions but how their own behavior also plays a role. They are encouraged to look for the source of difficulties not within individuals but within the interactions that occur.

The second, related construct is that of patterned interaction (Minuchin, 1974). Systems develop organized patterns of behavior over time. These patterns are not planned; they evolve. Furthermore, patterns are circular and can result in repetitive cycles in which the same outcomes occur, whether satisfactory or unsatisfactory (i.e., patterns become traditions). Consider the following example of a family-school mesosystem process. Andre, a fifth grader, is acting out in class and yells at his teacher. The teacher loses her temper with him and angrily sends him to time out. Andre tells his mother about his teacher's behavior. Andre's mother expresses her annoyance with the teacher to Andre. He acts out in class. And the cycle continues.

It is important to note that one could begin to describe this problem at any point and that each action is simultaneously a reaction. How you understand the behavioral sequence depends on how you "punctuate" it (i.e., what you choose to describe as the first action). Punctuation is arbitrary; that is, the person describing the interaction *chooses* the starting point. In most cases, individuals choose a starting point that supports their own view of the situation. Andre feels frustrated and, therefore, justified in yelling at his teacher. The teacher is angry at the disruption and feels punishing Andre is appropriate. Andre's mother is angry with the teacher and feels it is okay to let Andre know this. Because participants punctuate the situation in accordance with their own views of reality, they see themselves as "right" and the others who do not share their view as "wrong."

These circular patterns influence future behavior sequences. Consider a somewhat more benign example of how patterns become established. In a routine conference the teacher begins by telling the mother about her daughter's progress. As the teacher talks, the mother learns that she is a receiver of information and in response she sits quietly and asks occasional questions. Both their behaviors affect and are affected by the other's, and these initial behaviors set the stage for future interactions. Recognize also that this pattern may have started in a different way. If the mother seated herself and looked expectantly at the teacher, waiting for him to begin to talk, then the result would be the same: the teacher talking more and the mother simply listening.

These two concepts have important implications for understanding behavior and planning interventions. First, if you recognize that you are entering a circle, then you know that you cannot possibly go back far enough in time to know who "started" the problem. You will seek to understand the pattern rather than try to find a singular "cause." Second, if you are engaged in an effort to understand patterns and individual punctuations that the pattern supports, you will not be placing blame for the problem on an individual. Instead, you will focus on how the pattern can be interrupted and how a more productive pattern can be encouraged. When we turn away from causes and blame, we can move toward understanding and finding solutions.

Becoming Solution-Focused

Solution-focused approaches to counseling (e.g., de Shazer, 1985; Murphy & Duncan, 1997) draw on systems and empowerment theory (Cochran & Dean, 1991), along with brief therapy techniques to afford an immensely practical way to solve school-related problems. From the solution-focused perspective, change is considered inevitable, and contacts between parents, teachers, and students provide the opportunities for change. It is assumed that parents, teachers, and *students* have within them resources to solve problems they face. However, these ideas and competencies become available for use in the classroom only when the concerned individuals are invited to share them. Students, when asked directly about their goals and preferred methods for accomplishing those goals, become effective consultants about their own success.

This process does not have to take a lot of time. Consistent with systems theory, small changes are sought that will produce bigger changes later. Because less time is given to discussing problems, more time is available for generating solutions supporting future success.

When these ideas are applied to routine conferences, it is clear that students and parents must be at least as active in conferences as teachers. Successful routine conferences should result in students taking more responsibility for their school performance. By treating students as knowledgeable consultants on their own learning, focusing on goals and solutions rather than deficits and problems, and by expecting change, conferences can more easily attain this goal.

Communication Skills

If parents and students are to be full, active participants in routine conferences, then teachers must have highly developed communication skills in order to elicit and support this participation. In particular, they must be able to listen actively and respond empathically. Multiple sources are available that describe these skills in detail (e.g., Cormier & Hackney, 1999). A brief summary is provided here.

Listening is the single most critical variable to successful communication. As any good communicator knows, it is not as easy as it sounds. In social situations, a good listener is someone who stays quiet, nods at the appropriate times, and appears interested. *Active listening* is far more challenging and requires intense concentration. Active listeners are engaged in on-going observations of verbal and nonverbal messages being sent, and are alert to multiple levels of meaning and affect being conveyed. They do not become distracted by any single comment, recognizing that they must first understand the other's point of view before attempting to explain their own. They are fully engaged with the struggle to understand, and they use *empathic responses* to further the process.

Empathic responding is the mechanism by which active listeners (a) work to understand what others mean and (b) communicate that understanding back to the speaker. These responses reflect the deep meanings and feelings that are being communicated and convince others that they are being heard. Empathic responding leaves no room for opinions, advice, or judgments about what was said. Instead, when teachers send consistent messages that they hear and understand the parents' concerns, parents are encouraged to tell their stories. When parents feel valued, heard, and understood, they are more apt to view the teacher in a positive light and, in return, to listen to information the teacher wishes to share.

Teachers convey their acceptance of and respect for other participants through active listening and empathic responding. All other aspects of the conference depend on the quality of these communication skills (Studer, 1993/1994), but, unfortunately, parents report that we often fail them in this area (Turnbull & Turnbull, 1985). This is not surprising because few educators are taught these skills. Simply telling teachers that they should "listen" to parents is rather like telling students that they need to "behave." It is a laudable goal, but lacks specificity. Without explicit instruction, practice, and feedback on performance, improved communication skills are difficult to master. Therefore, we turn our attention to ways in which these skills can be developed and applied to routine conferences.

BEST PRACTICES

> "I've been amazed at how often the children, the parent, and I had the same concern. The children especially. I guess we've never given them enough credit to know exactly where they're having trouble....Their ideas [for improvement] are amazing....They were demanding of me to keep track...of what they are working on....The ownership of it was amazing."
>
> —Teacher discussing family-school conferences

> "The parents...loved this kind of conferencing. They saw such value....They came back excited....I had one parent come back with something from the Internet [about] ways to help your child at home...and she asked me what I thought of it. I thought, oh my gosh, I never had parents come in with things like this...."
>
> —Teacher discussing family-school conferences

> "I never come to parent-teacher conferences, but I'll never miss another one of these"
>
> —Parent discussing student-led conferences
> (from Seliner, 1997)

> "I think [doing student-led conferences] really does make a difference. It's definitely easier because you know the outcome of the conference and you don't get the jitters and all worried wondering about the outcome. . . ."
>
> —Sixth-grade student (from Austin, 1994)

These quotes come from teachers, parents, and students who have experienced the success of the alternative conference styles described below. In *teacher-led conferences*, which we call family-school conferences, teachers use their knowledge of systems theory and communication skills to engage students and parents in the conference process. Teachers use specific preparation methods and follow a flexible, yet structured, format to elicit student strengths. In *student-led conferences*, teachers have a less active role in the actual conference. Rather, they help students evaluate their own work and prepare them for presenting this work to their parents. This style allows many conferences to take place at once in the classroom, with the teacher acting as host. School psychologists providing training should invite teachers to consider both styles and determine collaboratively which approach is most applicable to the particular school and community.

Family-School Conferences

Family-school conferences are designed to be collaborative conversations among all individuals concerned with the student's success, including the student, teacher, primary caregiver(s), and as many other adults as possible who have a significant role in the student's life. The term "collaborative" denotes that everyone is working together in specific ways; "conversation" makes explicit that this is not a one-way telling of information by the teacher. Collaborative conversations "improve relationships, foster understanding, increase competence and lead to more lasting change.... Collaborative practices emphasize the importance of partners teaching each other about personal experiences, goals, and possible solutions. The aim is not to convince others of solutions and competence but to ask questions and understand experiences in ways that illuminate resources and spur people to action" (Koch & McDonough, 1999, p. 11).

There are four major outcome goals for this type of conference. First, each participant will be both a teacher and a learner; everyone will have the opportunity to share important points and listen to those of others. Second, expectations about and plans for the student's success will be developed collaboratively. Third, students will leave feeling greater ownership of their own learning. Fourth, all participants will leave feeling optimistic about each person's contribution to the student's future success.

TRAINING SEQUENCE

To conduct family-school conferences, teachers need specific instruction, practice, and feedback. School psychologists developing this training should plan to provide a minimum of 6–9 hours of initial instruction/practice followed by a minimum of 6 hours of "refresher" sessions and feedback on videotapes of actual conferences.

The training sequence involves three major tasks. The first task is to help teachers *think differently* about families, schools, and problems. Teachers are provided information on systems principles and collaborative approaches. Once they see that there is a different way to conceptualize the relationships between families and schools, they can begin to understand different intervention alternatives. As part of the second task, teachers learn how to *talk* to families in ways that encourage dialogue and collaboration through communication skills training and an introduction to solution-focused strategies. The third task introduces specific methods to *conduct* and evaluate routine conferences. Each of these tasks is discussed in more detail below.

Task One: Understanding Systems Principles and Collaborative Approaches: The CORE Model. We have summarized important information about systems theory and collaboration under the acronym CORE. That is, following any encounter between families and schools, the goal is to have all participants leave feeling more Connected, Optimistic, Respected, and Empowered than they did prior to the encounter. These four CORE elements maximize the opportunity to collaborate effectively with families. In the model, collaboration is seen as far more complex than simply working together on a problem or issue; it involves a complete reorganization of the ways in which parents and teachers work together.

We teach the CORE model to teachers in a fairly didactic way. Ideally, the group will read about the model in advance (Minke, 2000; Minke & Vickers, 1999; Vickers & Minke, 1997) to reduce presentation time. Regardless of how this information is shared, we encourage a lively discussion and debate as a means of modeling the communication strategies taught later in the training. We focus on how the model is applied to routine conferences by describing the beliefs (italicized below) associated with each model element.

Connecting. The degree of connectedness within a system is a widely accepted measure of system functioning (Olson et al., 1983). Such connections foster trust, and *trusting relationships are the backbone of* *collaborative efforts.* In conferences with families, teachers foster connections by using clear and open communication and encouraging mutual sharing of beliefs and goals. Disagreements are expected and valued; what matters is that everyone's view is heard and given serious consideration. Further, when teachers approach families in ways consistent with the other three CORE elements, positive connections will develop.

Optimism. A hopeful attitude springs from the system's premise that behavior occurs in predictable, circular patterns. *No one person can be seen as the cause of a poorly functioning system.* Instead it is assumed that all individuals involved are *doing the best they can;* the challenge is to develop a full understanding of others' positions. To become more optimistic, teachers are encouraged to recognize how the system contributes to both failures and successes and how each member can influence the outcomes. Each system member is presumed to be capable of doing what is necessary to learn and to change. This is an especially helpful premise in working with diverse families. Because "different" is not synonymous with deficient, teachers learn to concentrate on family strengths rather than weaknesses. By approaching families with optimism, educators consistently send the message: "We can work together."

Respect. To connect effectively with families, educators must treat all families with respect. Respect assumes that each family member is concerned and caring and has the *right to differing values.* Respect also assumes that each participant has valid expertise to offer; each person is both an *expert and a learner* during the conference. Families know their children best, but they are also eager to hear how others see their child. Sometimes families may have little confidence in their own expertise or feel intimidated by professionals and need some encouragement to share their knowledge. By entering conferences with the expectation of being learners as well as teachers, and by using communication strategies that allow families to share what they know, educators can model respect and concern for families' views.

Students warrant the same respect that adults accord each other. Because they are central parts of the mesosystem, *children must be active participants.* When children participate, they have the opportunity to witness adults working together on their behalf and to personally hear adults' expectations. They can also share their expectations of the adults. Because everyone is present, there is less opportunity for misunderstandings. Further, students can be active contributors to any plans for change that are made. Like parents and teachers, students are more likely to be committed to plans they had part in developing. Educators may have reservations about including students and trainers must be prepared to fully process their concerns (see Minke & Vickers, 1999).

Empowerment. Empowerment refers to providing individuals with the opportunity to demonstrate their skills and competencies, usually in arenas where opportunities to do so have traditionally been limited. Within the education context, the general goal is to increase the self-confidence and assertiveness of parents and guardians in promoting their children's education (Coleman & Wallinga, 1999–2000). However, because *power and responsibility are shared,* it is essential that all members of the partnership, including students and educators, feel capable of making decisions and taking individual action. Identifying each person's particular skills and strengths de-emphasizes deficits and concentrates on what can be done differently.

When families and educators experience a sense of empowerment, it relieves any one participant (usually the teacher) from the burden of being an "expert" on everything. Rather than "teaching and telling," teachers focus on listening and understanding. Each individual is supported in expressing his or her own views and participating in the development and enactment of plans for continued success.

An effective method of dis-empowering others is to give advice. Therefore, *advice is avoided.* Advice, even when solicited, relieves the other of responsibility for the solution. Also, once used, it tends to become a major mode of communication. Even worse is unsolicited advice, which is often construed by the receiver as implicit criticism of his or her skills and abilities. When there are issues to resolve, teachers are encouraged to use effective communication skills to help the family generate and evaluate its own ideas rather than immediately offering a single "best" solution.

Task Two: Effective Communication Skills. Thinking differently about families as with the attitudes, beliefs, and expectations described above is essential to successful collaboration with families but, by itself, is not sufficient. Thus, the model also requires teaching the skills needed to listen actively and respond empathically to families. We focus on a relatively small number of skills, including attention to nonverbal cues, reflective and empathic responding, modeling the collaborative role, searching for strengths, and reframing. We stress how to use these skills when delivering and receiving both positive and negative information and blocking blame (see Minke, 2000).

Multiple written and role-played exercises are used to assist teachers in becoming comfortable with the skills. For example, while coaching teachers to search for strengths, we remind them that families often tell stories of defeat and desperation. It is natural to feel sorry for them and to convey that sympathy. By using the following example we illustrate how it is more helpful to highlight the family's strengths when responding. A single father says, "I don't usually get much sleep because I work the night shift. I stay up to get my daughter off to school and then do housework until she comes home at noon. Then I take her to my mother's house and sleep until the other kids get home from school." We present a typical, sympathetic response ("That must be really hard on you.") and then ask teachers to provide an alternative, empathic response that emphasizes the family's strengths (e.g., "It sounds like you really care a lot about your children to make such sacrifices for them. They are fortunate to have such a devoted dad."). Similar scenario exercises are offered for each skill taught. Table 1 shows an exercise that requires use of multiple skills. In some cases, only the dialogue column is presented. Teachers generate both alternative responses and a rationale for them. For groups having more difficulty with the skills, both the dialogue and rationale columns are presented to assist teachers in developing alternative responses.

Teachers should also practice avoiding jargon. Using a vocabulary unfamiliar to parents is confusing, sets up a unidirectional process, and creates a non-collaborative experience for all parties (Rotter, Robinson, & Fey, 1987). During training, teachers can make a list of frequently used educational terms and write alternate, more easily understood words to substitute (Fredericks & Rasinski, 1990).

Task Three: Preparing for and Conducting the Routine Conference. Training proceeds more easily with a step-by-step guide to the conference format. Development of this guide should be a collaborative effort between trainers and teachers, so that circumstances unique to the group can be considered. However, each of the following areas should be discussed.

Consider carefully who should participate. Minimally, participants include one or more teachers, one or more parents (or guardians), and the student. For older students who have more than one teacher, it is best to have a single conference with as many teachers as possible. This may require some creative scheduling among teachers and families. If the child has two parents, then every effort should be made to get both points of view. If parents are divorced, then the parents should decide whether separate conferences are desirable. In addition, if there are other significant caregivers, such as day care workers or grandparents, then parents should be encouraged to invite them.

Prepare participants. Preparations by all participants are essential to a smooth and productive conference (see Table 2). Developing preparation documents and activities for parents and students as part of training is valuable, not only in fostering feelings of competence, but also in eliciting potential difficulties that must be addressed (e.g., providing child care for young siblings).

Asking parents and students to prepare is a demonstration of optimism, respect, and empowerment. It underscores the critical roles they play in the conference. Table 3 shows a sample letter of invitation to parents. Teachers should prepare students for their roles by helping them develop their own lists of strengths and areas for improvement. Students should practice introducing their parents and teachers to each other.

Encourage teachers to carefully consider information they wish to share in the meeting. A mental survey of the child's specific academic, social, and emotional progress may be helpful. Teachers' preparation is considered an ongoing process in which the teacher remains alert throughout the term to stories, products, or events that the parent would like to know about (Bjorklund & Burger, 1987). These observations form the basis for anecdotes that convey the teacher's

Table 1. Communication skills practice

Dialogue	*Alternate Response*	*Rationale*
Parent: I know David is a slow learner, but I just hoped he would be reading better by now. **Teacher:** Don't worry. He really is doing as well as can be expected given his abilities.	You sound worried about David. Tell me some more about what you are seeing with his reading.	Empathic response • clarifies: seeks to understand parent's concerns more fully • validates parent's view • avoids opinion • avoids minimizing
Parent: I don't really understand all of the information in her testing reports. Are you saying Serita can't learn? **Teacher:** To be honest, I think Serita's difficulties have more to do with her attitude and behavior than with a learning disability.	No, I believe Serita can learn. Tell me some more about your questions so we can figure out how to get them answered.	• answers question directly • seeks information • avoids the expert role • avoids opinion
Parent: What do you see as Jeffrey's main problems? **Teacher:** Well, he is pretty unmotivated, he can be lazy sometimes, and he can be quite disruptive during math class.	Sometimes I find it hard to get Jeffrey interested in class projects. What have you found at home that really sparks his interest?	• is clear and specific • asks for parent's opinion • avoids labeling • avoids laundry list of problems
Parent: What do you see as Mark's main problems? **Teacher:** Oh, I am so sorry to have to tell you this but he may be socially and emotionally disturbed. That is why we want to do the testing.	There are a few things we are working on with Mark: helping him behave appropriately with the other children is one. How does he do with his brother and sister?	• provides specific behavior of concern • asks for more information • avoids sympathy • avoids jargon • avoids labeling • avoids expert role
Parent: Kelly is so impulsive! Will she always be like this? **Teacher:** Oh, I'm sure she will grow out of it. Lots of kids go through these stages.	Kelly can be very energetic and spontaneous. In what kinds of situations do you find those qualities upsetting?	Reframing response • effort to set up situation where parent can appreciate the positive side • avoids cliché • avoids opinion • avoids discounting

understanding of the child "as a total human being" (Manning, 1985, p. 344).

Preparation of the environment is particularly troublesome in many schools. However, it is important to provide adult-size chairs and to avoid sitting behind a desk (Wolf & Stephens, 1989). In addition, it is essential to assure privacy and confidentiality during the conference.

Develop a Flexible Conference Format. Each conference should have a logical beginning, middle, and end (see Table 4). To emphasize from the first that students have a central and active role in the conference, they are asked to introduce the adults to one another. Some small talk may follow; the teacher makes eye contact and tries to connect with each participant. The teacher then provides some "structuring" of the process, reminding participants of goals of the conference and how discussion will proceed.

The student is given the opportunity to speak first. The teacher attempts to elicit others' perspectives on each of the student's points, allowing a conversation to develop. This conversation constitutes the "middle" of the conference. If the student offers that he or she feels especially successful and interested in reading, then the teacher opens the topic to others by saying, "What have you noticed about reading?" If the teacher had included reading among the points that

Table 2. Preparing for a family-school conference

Prepare Parents:

- Develop a letter describing the meeting. Include time, place, options for rescheduling, and the amount of time the meeting is expected to take.
- Ask parent(s) to invite any other significant adults in the child's life (e.g., daycare provider, grandparent). Be clear that this is an option not a requirement.
- Ask parent(s) to bring the student with them to the meeting. You may want to include a rationale for including the student that conveys the positive and proactive tone you hope to have in the meeting.
- Ask the parent(s) to write down their thoughts about what is going well and not so well for the student plus one or two key issues they wish to discuss in the meeting. Encourage them to talk with the student. You may wish to include a separate piece of paper with a limited number of questions for them to answer.

Prepare Yourself:

- Make your own list of what is going well and not so well for the student. Try to limit yourself to the most important pieces of information you need to convey. Avoid creating a laundry list of problems. If desired, prepare a folder of work samples or test results that illustrate key points.
- Think about anecdotal stories that underscore the child's uniqueness and will convey to the parents that you have a connection with their child.

Prepare Students:

- Take some time in class to prepare the students for their participation. Emphasize that they will have an active role in the conference.
- Explain the conference procedure (e.g., "This will help us all work together to help you do well in school.").
- Help the students practice introducing you to their parents.
- Ask individual students to share with you (or to write down, if old enough) their thoughts about what is going well and not so well this school year plus anything they wish to discuss in the meeting.

Prepare the Environment:

- Try to find a comfortable space with sufficient adult-sized chairs.
- Eliminate physical barriers. That is, do not sit behind a desk. Arrange chairs in a circle, if possible.
- Consider offering refreshments.

he or she wanted to mention, then it is appropriate to do so briefly after others have addressed this point. The teacher may offer specific work samples or test results to illustrate the comments. When the discussion seems complete, the student is encouraged to state another point he or she wishes to make. After the student exhausts his or her list, and each point has been discussed, the teacher asks the parents if they have additional points. Each of these is explored in turn, making sure the student has an opportunity to comment throughout the discussion. Ideally, following this iterative process of pursuing information from the student and parent, the teacher will not need a turn because the important issues would have been collaboratively discussed already, with the teacher providing input at appropriate times. However, if all of the teachers' points have not been covered, then the teacher brings them up at this time, again encouraging others to comment.

Facilitating this kind of conversation is a difficult skill to master. Teachers are called on to use effective communication strategies to ensure that everyone feels heard and valued in the conversation. They need to check back with participants several times to be sure that each individual has had his or her say. Sometimes strengths and concerns blend together and the teacher must be sure that the student and parents have had the opportunity to discuss all of their issues. For example, assume that during the part of the conference when concerns are being discussed, a father mentions his daughter's interest in science and how she loves the classroom butterfly farm, but he also notes that she has trouble spelling when she tries to write about butterflies. The teacher would invite others' views (including the child's) on spelling, then contribute her thoughts about the students' spelling skills. The teacher would also be careful to validate the positive part of the parent's message; that is, the

Table 3. Sample preparation letter for parents

To the family of ________________________

This year I will be using a Family Conference model for conferences. I believe that a more productive conference involves the teacher, the student, and the student's family. During the conference we will discuss your child's progress so far this year, and I will have samples of your child's work to share with you.

Please bring your child with you to the conference. Also, please think about the following questions, and jot down your thoughts before the conference.

- What are two or three things I am most pleased about in my child's school performance this year?
- What do I think my child needs to improve on?
- What are my hopes for my child during this school year?
- What are other issues or concerns I would like to talk about?

Please bring your notes with you to the conference. I will be working with the children in the classroom to help them think about these same questions. You may want to discuss the conference with your child as well. You may also wish to invite other adults important in your child's life (e.g., grandparents, other caregivers).

As we discuss your child's progress we will develop together any plans that we believe are needed to continue to support your child's success at school.

Please let me know if the following time is convenient for you to meet:

Date: Time: Place:

If not, please write or call with suggestions of other, more convenient times. I am looking forward to meeting with you and your child.

student's enthusiasm for the science project. Finally, the teacher would return to the father to determine whether there are other points he wishes to discuss.

Some time in each conference is spent on developing a plan to support the student's continued success and to tackle needed improvements. This plan should be specific and clearly doable. Insofar as possible, the plan should be elicited from the student. Each participant should have a role in the plan; that is, a specific action each will take to ensure success.

The final part of the meeting includes summary and follow-up. The teacher can summarize or invite one of the participants to give his or her view of what has occurred. No matter who does it, each person should have the opportunity to add or subtract until there is mutual agreement. The last agenda item is to determine if follow-up is needed. Follow-up should be very specific. That is, there should be explicit discussion of how participants will know that the plans they developed are working and when this evaluation will be made.

The issues addressed in a routine family-school conference should be relatively minor ones, such as homework completion, talking out of turn, or mild misbehavior. The main thrust of the conference should center on what is going well and how this success can continue to be supported. Significant problems such as retention and IEP development cannot and should not be addressed in the 15–20 minutes that are usually allotted for routine conferences. Collaborative problem-solving meetings (see Vickers & Minke, 1997; Allen, this volume) provide a format for resolving more serious issues. If such issues arise unexpectedly in a routine conference, then part of the follow-up plan should be to conduct a problem-solving meeting.

Evaluation of Conference Effectiveness. A final step in training is to develop a form for teachers to evaluate their effectiveness in conducting conferences. The sample (Table 5) serves both as a reminder of the skills teachers are trying to use and a method of iden-

Table 4. Conference format

Introductions:

- Ask the student to introduce everyone.
- Begin connecting with all participants by using the communication strategies we have discussed (e.g., make eye contact, thank them for coming).

Structure the process:

- Give a short description of the agenda (i.e., everyone will have a chance to share, conference will take around 20 minutes, at the end plans for continued success will be made).
- Ask student to begin (e.g., "We are here to talk about your progress in school so far this year. I believe you had some ideas you wanted to share, so let's do that first.").

Create a conversation among the participants:

- Encourage participants to comment on each of the student's contributions by asking if others have noticed the same strengths/needs.
- Once the student's list is exhausted, give parents an opportunity to discuss additional points that were not mentioned by the student.
- Integrate your own observations and comments at appropriate points in the conversation. The goal is to cover your own points at natural times in the conversation. If you have additional points, then add them after all the other participants have given their input.

Develop plans to support ongoing success:

- Elicit agreement about one or two areas that need work.
- Ask the student for ideas on how to address these areas. Give each individual at the meeting an opportunity to give ideas and to have a role in the plan.
- Recognize if there are serious problems to be addressed. If so, then schedule a separate problem-solving meeting.

Summarize and plan for follow-up:

- Either summarize the meeting yourself or invite one of the participants to summarize. Be sure to agree on a specific time and method for following up on the plan's success.

tifying areas where additional practice might be needed. It is also helpful to build a set of frequently asked questions with answers for teachers to take with them to solidify aspects of training (see Table 6).

Practice and Feedback. Changing from traditional to more collaborative conferences is quite challenging. Teachers value the opportunity to practice in controlled (role play) settings first, followed by feedback on "real" conferences. In setting up role plays, it is helpful to move from easier situations (i.e., examples in which the child is doing well) to more difficult situations (i.e., examples in which the parent and teacher have a strained relationship). Table 7 shows a sample we use for a child doing well academically with some mild social concerns. Teachers themselves generate many of the more difficult scenarios; this process allows them to try out their skills in a safe environment with a situation they find anxiety provoking.

Following the initial training sessions, teachers videotape one or more of their actual family-school conferences. Teachers may be reluctant to do this at first. However, once they try it, teachers report feedback from videotapes as among the most valuable parts of training. Tapes may be reviewed either individually or in groups. Both methods have merits. Individual feedback allows assistance without embarrassment in front of peers. However, group feedback is less time-intensive and offers the benefit of teachers learning from each other. It is probably best to let the trainee group decide the feedback method, if time permits. In either case, trainers need good supervision skills to provide feedback in helpful ways. We show strengths of the tapes as "highlights" and use the positive reframe of "missed opportunities" to review parts of conferences that were less consistent with the skills taught.

OUTCOME DATA ON FAMILY-SCHOOL CONFERENCES

We are engaged in ongoing research evaluating the effectiveness of the family-school conference method. The comments below are from a group of five ele-

Table 5. Conference Evaluation Checklist for Teachers

Prepared parents:

_____ Letter sent asking for meeting.
_____ Form included to help parents organize thoughts.

Prepared yourself:

_____ Reviewed child's work and developed list of a few key points to be communicated.
_____ Developed comments designed to highlight child's uniqueness.

Prepared students:

_____ Explained procedures.
_____ Practiced having students introduce the adults.
_____ Helped students develop list of strengths, needs, and comments.

Prepared environment:

_____ Comfortable adult chairs
_____ Avoided using desk as a barrier.

During the conference, to what extent did I accomplish the following (use scale of 1–5 with 1 meaning not at all and 5 meaning a lot):

_____ Introductions; connected with each participant.
_____ Invited child to share first and provided ample time for child to present comments.
_____ Invited parent to share and provided ample time for them to express comments.
_____ Integrated teacher comments as appropriate and introduced additional points, as needed.
_____ Used effective communication strategies (attended to non-verbals, reflected, highlighted strengths; used clear, jargon-free language; focused on specific behaviors).
_____ Responded effectively to negative information (validated concerns, asked for clarifications, summarized, and checked accuracy of understanding before problem solving).
_____ Developed plans collaboratively as needed to support success or solve problems.
_____ Elicited or provided a summary of the conference.
_____ Determined what, if any, follow-up is needed.

To what extent did the following occur in your judgment:

_____ Each participant left the conference feeling hopeful.
_____ Each participant left the conference feeling a part of the solution to any problem.
_____ Each participant left the conference feeling heard and understood.
_____ The parents left the conference feeling in charge of their child.
_____ I (the teacher) left the conference feeling in charge of teaching the child.
_____ The child left the conference feeling in charge of his or her own learning.

mentary (K–4) teachers who participated in a sequence of training and practice; they have conducted family-school conferences across two school years. These teachers noted a number of positive outcomes. Parents reportedly came to the conferences more often, brought more extended family members with them, were more prepared for and active in the conferences, and participated more fully in their child's education after the conferences. Students reportedly were more excited about their own learning and progress following the conferences; several teachers noted their surprise at the quality of the students' input on how they learn best. Teachers also felt they learned a great deal more in the conferences than they did in traditional conferences. They observed family dynamics and developed a greater understanding of the child's preferences, strengths, and needs. One teacher noted that the process eliminated trial and error in problem solving. When she offered children a choice from a menu of her ideas, she found that she often had to go through several steps before the problem improved. In the new format, because ideas

Table 6. Frequently asked questions and possible responses

Will I have time to do this?

- Teachers using this format have found that it can be done in the same amount of time as traditional conferences.
- Once you have sample videotapes you can share one with the faculty and note its length.

What if the parent becomes angry?

- Use reflective listening and empathic responding to understand the parent's views without becoming defensive.
- If this is ineffective in reducing the parent's anger, then consider calmly ending the meeting by planning a problem-solving conference for a specific future date.

What if I can't think of anything to say?

- Try summarizing what you have already heard. This will usually get you back on track.

What if I say the wrong thing?

- It is fine to state directly that you are concerned that what you've just said is not what you really wanted to say. Take a minute to think about what you wish to convey and try again.

What about giving test scores? What if I have to discuss retention?

- If students are to benefit from the administration of tests, then they need to know where they are relative to district and national standards. Avoid an emphasis on ability. Rather, emphasize that with hard work and practice even low scores can be improved dramatically. Focus the discussion on how best to improve the situation.
- If ongoing, two-way communication is in place between the family and the school, a discussion of retention should not be a surprise. Because the student is the one who must cope with the retention, it is best to have the student understand as clearly as possible the reasons for it.
- Except for the very youngest, students who are doing poorly already know it. Discussing their difficulties outside their presence does not "protect" them. Rather, it denies them the opportunity to participate in solving their problems.
- In rare cases, consider having a discussion with the parents outside of the student's presence until the adults have become comfortable with the available options. Then bring the student into the discussion.

What about the parents who just won't come?

- Be sure you are offering as many options as possible for parent participation (e.g., holding conferences in the evenings and/or in community rather than school settings). Offer childcare for siblings.
- Rely on word of mouth. Over time, as parents become more comfortable with conferencing, the word may spread throughout the community.

I teach young children. Can they really do this?

- Children as young as preschool can be actively involved in at least some phases of the conference (Bjorkland & Burger, 1987).
- Younger children may require more time and support in preparation and participation (e.g., more direct questioning, teacher recording of responses for use in meeting).

came from the child directly, the first plan typically worked. Finally, several teachers noted that they developed more positive relationships with their students' families. In several cases, teachers indicated feeling greater appreciation from parents following family-school conferences. No negative effects from using the method were reported.

These teachers stated that preparation for the conferences was relatively easy. They used existing journal and group activities to help students plan. Preparation was more time consuming for kindergarten teachers. The younger children required greater encouragement to express their ideas and more support in remembering what they said. With regard to training, teachers reported a preference for school-day sessions rather than after school. And they uniformly expressed an interest in on-going training and support. As one teacher said, "I still feel like a beginner." Significantly, all of the teachers in this training group have continued to use family-school conferences.

Table 7. Sample role play scenario

Teachers are given the following information. Each teacher takes a different role in the conference. Coaching and feedback are provided as needed throughout and following the role play.

Conference participants: James, both parents, and the teacher.

Student: James, age 6, in first grade. James is a very serious child. He has asthma, which results in 2–3 days of missed school per month.

James' key points for the conference:

- I like reading.
- I like recess.
- I don't like it when kids call me "wheezer-boy."

Parents' key points (can be divided between parents as you choose):

- James loves coming to school. He hates to miss because of illness. He enjoys sharing his reading with us.
- We are worried that his asthma medication may be interfering with his ability to concentrate.
- We worry that he won't be able to use his inhaler in school as needed. Have there been any problems?

Teacher's key points:

- James is quick to cry when others tease him. He hasn't responded well to my attempts to help him ignore them.
- James is doing well academically and is picking up reading skills quickly.
- He does not always want to work independently during seatwork time.

Anecdote: James is so curious about things. He is especially interested in penguins. His ability to retain information is remarkable. He uses his computer and has pictures and information about more kinds of penguins than I ever knew existed!

They also encouraged their colleagues to participate in the training.

It is important to note that, thus far, we have evaluated the family-school conference method with only elementary school teachers who volunteered for the training. Adaptations for use with older groups of students are needed. However, because it is inconsistent with collaboration to force teachers to change their approaches to conferencing, it is anticipated that the training would only be conducted with volunteers.

Although more formal evaluation data are needed, including data from participating students and parents, it appears that the revised conferences were successful in achieving the goals of developing more positive relationships between families and teachers and assisting children in taking greater responsibility for their own learning. However, successfully implementing family-school conferences is challenging because it requires a shift in thinking that can be very difficult for teachers to master. School psychologists who elect to provide this training should expect to have an ongoing relationship with teachers in their buildings that will be beneficial to all.

Student-Led Conferences

Student-led conferences are a second alternative to traditional methods. This approach differs from family-school conferencing in that the relationship between families and teachers is not addressed directly. Instead, teachers assist students in communicating their progress to their families with little teacher involvement in the actual conferences. Student-led conferences are built on student work samples. Throughout the marking period (or year), the teacher and students designate specific work samples as "portfolio" or "conference" pieces. Toward the end of the period, both the teacher and students reflect upon the students' progress, most often in a written format. Following this period of reflection, parents are invited to the school for a conference that the student conducts. Students review their academic progress with their families and answer their questions. Parents provide specific feedback and assist with goal setting, again typically in written format. Multiple conferences occur in the classroom at the same time. At the end of the conferences, families enjoy refreshments with the teacher.

Although participants' roles differ, this approach shares with family-school conferences the goal of empowering students by increasing their ownership of the learning process. As students are encouraged to reflect upon their work and discuss it with their families, they more readily set goals for themselves and achieve at a higher level. The conferences also bring families and teachers together in a way that highlights their mutual goal of supporting student progress.

TRAINING SEQUENCE

Training teachers to conduct student-led conferences involves two primary areas: (a) assisting teachers in developing the conference format and (b) helping them prepare students (and parents) to participate. Thus, the role of the school psychologist involves presenting the conference style to teachers, guiding them through key decisions, and assisting them with the student training (e.g., helping with student role plays).

Developing the Conference Format. The actual conference process is determined by the teachers-in-training. They review relevant issues and make collaborative decisions about how they would like to proceed. Some of their decisions will hold for the entire school; others should be left open to individual teacher preferences. Some of these issues and choices are discussed below. During training, teachers should be encouraged to brainstorm creative solutions to the specific challenges in their settings.

To what extent will student-led conferences be utilized? Some teachers use student-led conferences exclusively, believing they are a major element in building classroom community (Austin, 1994). Others use a combination of traditional and student-led conferences throughout the school year (Seliner, 1997).

What types of work should be included? Many teachers focus on core academic subject areas and have their students select several papers from these areas (Seliner, 1997). Other methods include using more elaborate portfolios that focus on the student as a total learner (Austin, 1994) or developing centers that emphasize a variety of areas, including physical, artistic, and emotional development (Picciotto, 1996).

How will grades be assigned? In some instances teachers use a self-grading format in which students are responsible for establishing or negotiating their own grades. This helps demystify the grading process as students learn how grades are earned. However, this may not be a feasible choice for all teachers because of time constraints, school policy, and teacher preferences. Other teachers choose to assign grades in the traditional manner.

Who will be invited as participants? Some teachers include extended family members and siblings, whereas others invite only parents. Teachers should consider desires of the family and values of their community in addition to their own preferences when making this decision. Once these decisions are made, the school psychologist collaborates with teachers in planning preparation for students, parents, and themselves. A concrete plan for accomplishing preparations should be a primary product of the training.

Preparing participants. Students are prepared by first acquainting them with the new conference process. Austin (1994) reports that she emphasizes the importance of becoming an active learner, and that part of becoming an active learner is learning how to identify personal strengths and weaknesses. By critically examining their work, students may also increase their ability to identify learning difficulties and possible solutions.

The student's first task is to collect the appropriate materials. The teacher provides specific guidance by encouraging choices that either show the student's best work or were special learning experiences. As conference time approaches, students assemble their materials and reflect upon their progress in writing. Examples of reflective questions include: "How does this work sample reflect me as a learner?" and "What did I learn from this sample?" If self-grading is utilized, then time is needed for students to calculate their grades and discuss them with the teacher.

Practice is critical to the success of these conferences. Usually, teachers model sample conferences first and then have students practice with one another. Classroom volunteers (e.g., college students) can be used to role-play conferences. Volunteers are instructed to ask "parent-type" questions in order to help students practice (Austin, 1994).

Preparation for parents is also essential. The invitation to the conference should include a description of each participant's role. For example, while the student's role is to lead the conference, the parents' is to listen to their child and ask clarifying questions. Parents are encouraged to provide praise and feedback and to assist their child with goal setting. Parental feedback may come either before the conference, in the form of written observations of the student at home, or in reactions and responses to work presented at the conference. Austin (1994) and Picciotto (1996) provide examples of both types of feedback questions.

Teachers also need to prepare themselves. Because students lead the conferences, teachers take on unfamiliar roles as hosts and observers. Teachers avoid interfering during the conference and defer to the student when questions arise, so that students remain in the "expert" role. Teachers also must arrange the classroom in such a way that families have space to view their child's work, as well as some privacy to discuss the student's progress.

Conducting the conferences. Student-led conferences typically begin by asking the student to introduce his or her parents to the teacher. The family then sits down to review and discuss the student's materials. Particularly for the first conferences, students may need written guidelines to help remind them of the conference steps (see Table 8).

Follow-up. Teachers assess whether or not this conference style was useful for participants by providing a short survey for parents to complete after the conference (see Picciotto, 1996, and Seliner, 1997, for samples). Teachers solicit feedback from students as well, either formally or informally. They should be ready to use active listening skills during feedback sessions, because students are often excited and want to share stories about their conference experiences.

Outcome Data on Student-Led Conferences

To date, formal evaluation of the effects of student-led conferences on parents, teachers, and students has been limited to rates of participation and anecdotal reports. These data suggest that student-led conferences are successful in increasing parental participation. Conderman, Hatcher, and Ikan (1998) reported an increase in conference attendance from 35% to more than 93% of parents during the 4 years they have used student-led conferences. Picciotto (1996) noted other benefits. Parents reported learning more about their child, teacher, and school. They were often impressed by how much their children accomplished and how confident and proud the children were when presenting their work. Teachers indicated they learned more about their students and established better communication and stronger ties with students and their families. Students showed an increased awareness of their own learning styles, strengths and weaknesses, and greater motivation for goal setting. In addition, students reportedly became more responsible, taking ownership and pride in their work, and became more

Table 8. Sample student-led conference checklist

_____ Introduce your parent to your teacher.
_____ Take your parent to a conference station.

Tell your parent about:

_____ your friends
_____ your reading reflection sheet
_____ our reading rewards program and which books you've read
_____ your Island of the Blue Dolphins folder (discuss the stories and novels we've read this year)
_____ your math reflection sheet
_____ your math that you can now do (demonstrate by doing the problems on your sheet)
_____ your poetry
_____ the book you have written and published
_____ our computer and the activities you've saved on disk
_____ your artwork
_____ our assignment book
_____ your report card and progress report

_____ ask your parent if he or she has any questions
_____ thank your parent for coming, walk him or her to the door, and let your teacher know you are finished

Source: Seliner (1997).

active participants in their own learning (Austin, 1994; Conderman, Hatcher, & Ikan, 1998; Seliner, 1997). There may be additional benefits for students and families from non-English speaking backgrounds. Because these students led conferences in their native languages, parents learned more about their child's schoolwork than from a traditional conference.

Some limitations of this conference style have also been noted. Shannon (1997) reported that in her sixth-grade class no parents requested a traditional conference as a follow-up, but that seventh- and eighth-grade teachers did receive such requests. The reasons for these differences were not reported, but it may be that parents of the older students desired information that the students themselves could not provide (e.g., high school choices). Quiroz, Greenfield, and Altchech (1999) caution that families from some backgrounds may respond negatively to this style if it violates cultural norms of respect for elders. Thus, it is important to solicit input from families in developing the conference format and to provide choices in conference style. Because some teachers may find the preparation of students too time consuming, this style of conference may be most easily introduced in schools already using portfolio approaches to assessment.

GETTING STARTED WITH ALTERNATIVE CONFERENCE STYLES

School psychologists who are interested in collaboration are positioned perfectly to be the facilitators of change in a school, but they cannot simply go to school faculty and say, "Here's how I think you should be conducting conferences." That approach is the antithesis of collaboration. Administrative support is essential, because training will take a large proportion of professional development time and will involve families in a new way. As university trainers entering schools, we first obtain commitment from the principal and then present our ideas to the faculty. We outline a number of family-school collaborative projects they might consider, including student-led or family-school conferences, and more intensive problem-solving approaches. We describe each possibility in detail and leave it to the faculty as a group to decide which avenue they would like to explore. After a particular approach is selected, individual faculty members choose whether or not to participate in the training offered. School psychologists working within a given school as internal consultants could begin by conducting a needs assessment survey (Nagle, this volume) to determine whether and in what ways teachers want assistance in communicating with families. As noted earlier, success is more likely if faculty and consultants plan an ongoing and comprehensive set of family-school collaboration initiatives. Alternative conferencing methods may be one of these.

SUMMARY

Routine parent-teacher conferences tend to be brief, ritualized experiences that leave both parents and teachers dissatisfied and do little to encourage collaborative efforts that support student learning. This chapter provides a framework for routine conferences that highlights collaboration and empowers parents, teachers, and students. More importantly, it stresses the transformation in thinking about family-school relationships needed to successfully use the alternative styles. Considering families as true partners who are competent, caring, and capable of change opens new avenues of intervention to educators. Increasing student ownership of learning, a primary benefit of these conference approaches, fosters more satisfactory, collaborative relationships among students, teachers, and families. School psychologists who model a respectful and collaborative approach to families in their own work will be more effective consultants and facilitators of change.

Conducting these alternative conference forms requires understanding of systems theory, solution-focused approaches to intervention, and effective communication skills. These theoretical foundations are familiar to most school psychologists, making them ideal candidates to provide pre-service and in-service training to teachers interested in experimenting with new methods of conferencing.

Family-school conferences involve teachers conducting collaborative conversations with parents and students. School psychologists conducting training first introduce teachers to a different way of thinking about families and schools using the CORE model. Most of the training time is devoted to role-play practice of the communication skills and conference process. Further sessions focus on trainer feedback of the teachers' videotapes of themselves conducting actual conferences. Teachers learn to prepare themselves, parents, students, and their classrooms and to develop a flexible format to follow during the conferences. In student-led conferences, students conduct their own conferences with their parents. Training for this format involves guiding teachers through a number of key decisions (e.g., what work samples should students select, how grades will be assigned), and preparing students and parents for their participation. Multiple conferences occur simultaneously in the classroom with the teacher acting as host and observer.

The chapter closes with suggestions for ways in which school psychologists can begin exploring the feasibility of training teachers in their settings to conduct these alternative conference forms.

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This book provides an excellent description of how one teacher has utilized student-led conferences in her sixth-grade classroom. Specific steps are outlined, and sample materials are provided. Also included is a discussion of increasing parent-teacher communication and building classroom community.

Minke, K. M. (2000). Preventing school problems and promoting school success through family-school-community collaboration. In K. M. Minke & G. G. Bear (Eds.). *Preventing school problems—Promoting school success: Strategies and programs that work* (pp. 377–420). Bethesda, MD: National Association of School Psychologists.
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Murphy, J. J., & Duncan, B. L. (1997). *Brief intervention for school problems.* New York: Guilford.
This is a concise overview of solution-focused approaches to school-related issues. Readers unfamiliar with the solution-focused literature will find it a good starting point.

Swap, S. M. (1993). *Developing home school partnerships: From concepts to practice.* New York: Teachers College Press.
This is an excellent overview of the barriers to effective family-school collaboration and offers concrete strategies on how to address them.

31

Best Practices in Behavioral Parent Training

Gretchen A. Gimpel and Brent R. Collett
Utah State University

OVERVIEW

Parent training is an intervention that is commonly used with families of preschool and elementary school–age children exhibiting externalizing disorders such as Attention Deficit Hyperactivity Disorder (ADHD), Oppositional Defiant Disorder (ODD), and conduct problems. Parent training may also be beneficial for families of older children as well as for families with children with other difficulties, such as depression or anxiety, and families in which abuse has taken place. Although the populations for which parent training is used are expanding, the majority of the empirical literature on parent training is still in the area of externalizing problems exhibited by young children. Parent training is one of the few psychosocial interventions with empirical support for the treatment of externalizing problems in children. A number of other treatments have been proposed for these disorders (e.g., social skills training, cognitive problem solving training), but they generally lack the consistent empirical support that parent training has received.

Parent training is unique among therapeutic interventions in that although the child is typically considered the "client" the majority of work is done with the child's parents and not directly with the child. The rationale for this approach is that by changing the manner in which parents respond to their child, the behaviors of the child will improve. Thus, parent training changes children's behaviors via changes in parents' behaviors.

Although there are a number of parent training programs used in practice and research, the general format of empirically supported programs is fairly consistent and is outlined in Table 1. As can be seen from this table, programs typically begin by teaching parents to be more responsive to their child. This is done by teaching parents to use positive reinforcement, in the form of verbal praise, for appropriate behavior as well as basic attending and listening skills. After parents have mastered this section of the program, they are instructed on the use of effective commands. Also introduced in this second segment are discipline techniques that are founded on behavioral principles, such as time out and/or removal of privileges. Thus, behavioral parent training programs are based on the concepts of presenting positives for appropriate behaviors and taking away positives for inappropriate behaviors. The positive portion of the program is conducted first to help build a positive parent-child relationship. This allows parental attention to become more reinforcing to the child and sets the stage for discipline (through the removal of positive attention) to more effectively decrease negative child behaviors (Barkley, 1997; Hembree-Kigin & McNeil, 1995). Parent training sessions typically occur once a week for about an hour and last approximately 8–10 weeks.

Parent training is often conducted in an individual format with the clinician working with one family, but treatment can also be conducted in a group format. Although the group format is likely to be most conducive to a school setting, there are advantages to the individual format (discussed later in this chapter) that school psychologists should consider. In addition, owing to the relatively short-term nature of parent training as an intervention it may be possible for

Table 1. Steps in an individualized parent training program

Part 1
- Assessment of child problems and family functioning
- Provide rationale for parent training method

Part 2
- Introduce positive attending component
- Provide description of skills and rationale for use
- Model positive attending for parents

Part 3
- Coach parents on use of positive attending
- Provide feedback to parents

Part 4
- Discuss giving good commands
- Introduce and explain use of discipline skills (time out)

Part 5
- Coach parents on use of discipline skills
- Provide feedback to parents

Part 6
- Address generalization of skills to situations outside the home

Part 7
- Promote maintenance of skills through booster sessions

school psychologists to conduct parent training with individual families.

Brief History

The parent training programs that follow the outline discussed above are largely based on original work by Hanf (1969), who first discussed the two-part parent training model that initially emphasizes positive attention followed by a focus on discipline in the form of time out. Hanf's work has been adapted by a number of others over the years, and several comprehensive parent training programs are based on her ideas (e.g., Barkley, 1997; Forehand & McMahon, 1981; Hembree-Kigin & McNeil, 1995; see annotated bibliography for an overview of selected programs). Over time, a significant amount of clinical research has been conducted on these programs. Much of this work supports the use of these programs with children, particularly those with conduct problems (Serketich & Dumas, 1996).

Patterson and his colleagues at the Oregon Social Learning Center have also had an important impact on modern parent training programs and the conceptual understanding of how those programs lead to changes in children's behaviors. Patterson's model of how conduct problems develop has been studied and cited extensively (Patterson, 1982). Through his work, Patterson has noted that children who exhibit conduct problems often have parents who demonstrate ineffective parenting strategies in response to negative child behaviors. Parent-child interactions eventually fall into a cycle of negative reinforcement, in which the likelihood of a behavior occurring is increased by the removal of an aversive. Parents give in to children's aversive behaviors (e.g., whining, temper tantrums) by removing their request that the child do something, and are subsequently reinforced by the cessation of the child's whining or tantrums. Eventually parents may withdraw from the relationship and decrease their overall monitoring of the child's behavior. At the same time, the child learns that if he or she screams or argues long enough, the parent will remove the request and the child will not have to comply. Thus, both the child and parent are negatively reinforced for inappropriate behaviors, which then escalate over time. Patterson and others have also noted that parents of children with conduct problems often exhibit a variety of other ineffective parenting practices. For example, these parents may be less supportive of their children, more inconsistent in their use of both discipline techniques and positive statements, and provide less supervision and monitoring of their children (Kazdin, 1998). Parent training programs attempt to break the coercive cycle of parenting and teach parents to reinforce appropriate behaviors and use more adaptive methods to deal with their children's inappropriate behaviors.

Importance of Early Intervention and Prevention

Parent training is often used with parents of preschool children, and early childhood is generally seen as the ideal time to intervene and prevent problems from worsening. Features of disruptive behavior disorders often emerge when children are three to four years of age and, although it was once assumed that children would outgrow these behavior problems, research suggests that this is often not the case (Loeber, Green, Lahey, Christ, & Frick, 1992). A significant portion of the children described as "hard-to-manage" as toddlers continue to demonstrate behavior problems well into early adolescence, and these behaviors often become increasingly resistant to change over time (Campbell, 1994; Eron, Huesmann, & Zelli, 1991).

Fortunately, research suggests that early intervention can prevent many of the deleterious long-term outcomes for children with conduct problems (Conduct Problems Prevention Research Group, 1999). Large-scale prevention/early intervention programs developed to date have typically included parent training as a central feature. For example, Webster-Stratton (1998) utilized a prevention model when she implemented her parent training program with groups of parents whose children were enrolled in Head Start preschool programs. The rationale for this project was to improve parents' competencies *before* children began to demonstrate clinically significant behavior problems. The results of this study suggest that the program was effective in increasing children's social competency and reducing child behavior problems. Further, most of the treatment gains observed were maintained a year after the program. Clearly, school psychologists may utilize parent training to build on parenting abilities as a preventive measure. This may be accomplished by offering these programs school-wide or targeting groups that are considered at-risk on the basis of demographic variables (e.g., low socioeconomic status).

School Psychologists As Parent Trainers

Although school psychologists may view parent training as something that is primarily done in clinic settings or by psychologists in private practice, parent training is an ideal school-based intervention. There are a number of factors that make parent training conducive to school settings including:

1. School psychologists typically have training in behavioral methods and behavioral techniques and therefore have the requisite background knowledge to conduct this type of intervention.

2. Parent training is a relatively time-limited intervention.

3. The equipment required for parent training is minimal; that is, mainly space and toys.

In addition, because externalizing disorders are some of the most common reasons for child referrals in school settings and because parent training is one of the most effective interventions for such problems, school psychologists who conduct parent training can greatly impact children (as well as their families) and their future social/emotional functioning.

BASIC CONSIDERATIONS

Prerequisite Knowledge

The empirically validated parent training programs currently available are based on behavioral principles, and are often referred to as "behavioral parent training." Assisting parents to identify appropriate reinforcers for their children, teaching parents to use ignoring to help extinguish behaviors, and helping parents implement discipline strategies to reduce inappropriate behaviors are integral to this treatment format. Thus, school psychologists planning to implement these programs should be familiar with basic behavioral principles and procedures. This includes knowledge of reinforcement strategies, extinction, and punishment procedures (e.g., response-cost, time out). Moreover, parent training requires that clinicians be able to translate their knowledge regarding these behavioral principles into terms understandable to parents.

School psychologists planning to conduct parent training should also be familiar with child development issues. This will allow them to help parents establish an appropriate set of behavioral expectations and provide interventions that are suited to a child's developmental level. Some parents may perceive their children's problems as more severe than they actually are, either because of inappropriate expectations or personal problems the parents are experiencing (Schroeder & Gordan, 1991). Thus, being able to talk to parents about what is developmentally appropriate and what they can expect from their child is important.

Appropriate Candidates

Parent training is most likely to benefit children who display noncompliant or oppositional behaviors in the home (Barkley, 1997). Specifically, parent training tends to be effective in improving parent-child relationships, increasing children's compliance with parental commands, and decreasing "acting out behaviors" such as tantrums and aggressive or destructive behavior (Barkley, 1997; Hembree-Kigin & McNeil, 1995). Behavior problems such as these are the hallmark features of disruptive behavior disorders (i.e., ADHD, conduct problems, Oppositional Defiant Disorder), and, as noted above, much of the research on parent training has focused on this domain. However, addressing these issues may be beneficial in treating any number of specific disorders and child behavior problems (e.g., child depression, anxiety, developmental delays, adjustment problems) (Barkley, 1997; Hembree-Kigin & McNeil, 1995).

Most of the programs currently available have been designed for children between the ages of 2 and 12 years (Barkley, 1997). Obviously, there are considerable variations within this age range, and it is often necessary to adjust programs so that they are appropriate for an individual child's developmental level (Forehand & Wierson, 1993). For example, while time out procedures are quite effective for young children, the duration of time out should be modified as a function of a child's age (i.e., shorter time-out intervals for younger children). Time out may not be appropriate for older children (e.g., older than 10–12), and may need to be replaced with alternative discipline procedures.

Although parent training may be a useful intervention for very young children and for adolescents, use of such programs with these populations would likely require substantial modifications. With young children (i.e., children as young as 18 months old), modifications would likely need to be made to accommodate a parent training program for their receptive language abilities. A behavior that may be labeled "noncompliance" in an older child may simply reflect a young child's failure to understand or inability to comply with a parental command. Similarly, parent training programs for use with the parents of older children and adolescents require significant modifications. At this developmental level, it becomes increasingly appropriate for adolescents to be included in decisions regarding behavioral expectations and consequences for appropriate and inappropriate behavior. Barkley, Edwards, and Robin (1999) have published a manualized treatment program (*Defiant Teens*) for use with this population. In their program, parents are encouraged to develop a behavior contract with their adolescents that clarifies behavioral expectations and consequences. Additional components are included to encourage parents and adolescents to solve problems in a collaborative manner and to communicate more effectively.

Parent-specific factors may also influence the efficacy of parent training and the likelihood that parents remain in treatment, and should be considered when determining whether or not a given child is likely to benefit from parent training (Kazdin, 1993, 1997). Some of the parent-specific factors that have been shown to influence the effectiveness of these programs include

1. Socioeconomic status

2. Parental psychopathology (e.g., maternal depression, stress)

3. Parental marital problems

4. Low social support

In addition, as with most interventions, motivation plays a prominent role in the success of parent training. While some parents are quite willing to participate in parent training and modify their parenting practices, others may view this as an insult to their parenting. Such parents often want the clinician to "fix" their child, since "the child is the one with the behavior problem." When presented with the rationale for parent training in a positive and enthusiastic manner, parents often become more engaged in this approach. However, some parents may continue to be resistant, thus making it necessary to pursue other treatment options.

Although parent training has been demonstrated to be effective as a primary or sole treatment, it often becomes apparent that additional services are required to adequately address the needs of children and their families. For example, it may be appropriate for school psychologists to refer a child's parents for outside services (e.g., marital counseling, individual therapy) in addition to continued participation in parent training. These additional services may serve to address the needs of a child's family more fully and often increase the success of the parent training program (Dadds, Schwartz, & Sanders, 1987; Webster-Stratton, 1994). Similarly, children may also need additional services (e.g., medication, classroom management programs, social skills interventions). Although some research suggests that treatment gains achieved during parent training generalize to other settings including school (McNeil, Eyberg, Eisenstadt, Newcomb, & Funderburk, 1991), this is not always the case (Kazdin, 1993). Thus, while parent training can be effective when used alone, it is often desirable for school psychologists to view this as one component in a more comprehensive treatment package.

Group Versus Individual Parent Training

Both group and individual parent training programs have been demonstrated to be effective, and both present unique advantages and disadvantages. Research conducted to date suggests that these two approaches are roughly equivalent with regard to efficacy and parent satisfaction (Serketich & Dumas, 1996; Webster-Stratton, 1984). Thus, the decision to utilize a group versus individual format is often dependent upon clinical judgment and pragmatic constraints.

Carolyn Webster-Stratton and her colleagues have compiled an impressive body of research involving group parent training utilizing videotaped models. Her findings suggest that these programs are quite effective and well accepted among parents (Webster-Stratton, 1984,1994; Webster-Stratton & Hammond, 1997). Advantages of the group parent training format noted by Webster-Stratton and others include

1. Cost effectiveness (e.g., Webster-Stratton (1984) showed group programs to be five to six times as cost effective as individual programs)

2. Opportunities for parents to benefit from the experiences of other parents also dealing with child behavior problems

3. Chance for socially isolated parents to interact and receive support from others

Although group programs have a number of benefits, they also present some limitations and drawbacks including

1. Parental feelings of reticence to actively participate owing to concerns others in the community will learn of their child's behavior problems or discomfort sharing information about their parenting practices

2. Inability of clinicians to adequately address needs of parents who have children with unique behavioral problems

3. Limited opportunities for parents to practice using behavior management techniques in session with clinician feedback

The advantages and disadvantages of individual parent training are essentially the inverse of those listed above. Without question, these programs are more time-intensive and, therefore, are generally more costly. However, individual parent training does provide a number of benefits not readily attainable through group parent training including

1. Psychologists can tailor an intervention to the needs of an individual child and family

2. Psychologists have opportunities to observe interaction patterns and parenting practices

3. Parents have numerous opportunities to practice using behavior management skills in session

4. Psychologists can observe parents' use of new skills and provide corrective feedback when necessary

Facilities/Equipment

It is generally helpful to begin with a manualized treatment protocol and make adaptations for individual families as needed. These manuals often contain parent handouts that can be photocopied, thus negating the need for clinicians to develop their own handouts. In addition, most manuals provide a rationale for the use of parent training and in this context provide helpful ideas for rationales that can be provided to parents. Having a manual is particularly important for a professional who is relatively inexperienced in conducting parent training but can still be helpful for those with more experience. Several manualized treatment programs are referenced and discussed in the annotated bibliography for this chapter.

Although many of the parent training programs discussed in manuals and in the literature were originally developed for use in clinic settings, these services can easily be provided in community-based facilities. In fact, some research suggests that community-based facilities such as public schools and community centers are advantageous in that they seem more accessible to minority families and families of children with more severe behavioral problems (Cunningham, Bremner, & Boyle, 1995).

Group parent training, which is more common in community-based facilities, obviously requires a facility with adequate space and seating for a group of adults. Parent attendance at group meetings is facilitated if child-care services can be provided onsite. Attendance is also encouraged if refreshments (i.e., snacks, beverages) or small incentives are provided. Group parent training programs often use videotaped models of appropriate parenting strategies and therefore require a television and video equipment. Videotaped materials can be purchased through several publishers along with additional resources (e.g., treatment manuals, parent handouts), and these are helpful for both group and individual programs.

In individual parent training, the referred child is included in treatment and is present for many of the sessions. Because much of the practice of skills takes place within a play-based context, a range of toys appropriate for children of various ages is helpful. It is often recommended that clinicians providing individual parent training observe parent-child interactions, either during structured activities or unstructured play, through a one-way mirror. These observations can provide critical information about interaction patterns that contribute to a child's behavior problems and serve as a useful tool in evaluating treatment progress (Hembree-Kigin & McNeil, 1995). An additional tool that is sometimes recommended is the "bug-in-ear" device. This includes an earpiece that parents wear during interactions with their child and a microphone that the clinician uses to communicate with the parent while observing behind a one-way mirror in another room. Although it is possible to conduct similar observations with the clinician in the room, child behavior may be influenced by the therapist's presence and this may not reflect an accurate sample of naturalistic parent-child interactions (Hembree-Kigin & McNeil, 1995).

Obviously, practitioners working in the schools typically do not have access to one-way mirrors and sophisticated microphone equipment. However, that should not discourage school psychologists from using an individualized parent training program. It is quite possible to conduct effective individual parent training with minimal resources. With access to a private room that contains chairs and a table and a small variety of toys, parent training can easily be conducted in the school setting. Instead of observing parents through one-way mirrors and providing feedback from out of the room, the school psychologist will simply be present with the parent and child and provide direct coaching and feedback to parents on their use of the learned skills.

BEST PRACTICES IN PARENT TRAINING

Before Beginning Parent Training

Before beginning parent training, the school psychologist should ensure that this intervention is appropriate for the presenting problem and that it has a high likelihood of success. Thus, an assessment of the presenting problem (including operationally defining the behaviors of concern) and of the family situation and dynamics should be the first step. As mentioned earlier, there is a great deal of empirical support for parent training, thus, it should be considered as a treatment option whenever a young child presents with externalizing behavior problems (e.g., noncompliance, temper tantrums, aggression). The practitioner also needs to take into account the parent specific factors described above before settling on parent training as the intervention of choice. Thus, the assessment phase may include not only information on the child but also information about the family environment and the parents' mental health status. Below are areas typically covered in assessments along with examples of questions or instruments that may be used:

1. Parent interview regarding the child's development, past problems, and current behaviors of concern
   - Describe behavioral difficulties at home and school.
   - How does child get along with peers/siblings?
   - Any major developmental problems, illness, accidents, etc.?
   - Has child ever received therapy before? If so, for what?
   - What does child do well or like to do?

2. Parent interviews regarding current discipline practices
   - Who ordinarily disciplines child?
   - How is child disciplined?
   - What is most effective? What is not effective?

3. Parent interview regarding family dynamics, marital problems, etc.
   - What is the home schedule of mother/father?
   - Has either parent received therapy?
   - What is the level of marital satisfaction?
   - How is child's relationship with mother/father?

4. Norm-referenced measures of a child's behavior
   - Child Behavior Checklist (Achenbach, 1991)
   - Behavioral Assessment System for Children (Reynolds & Kamphaus, 1992)
   - Disruptive Behavior Disorders Rating Scale (Barkley, 1997)
   - Home Situations Questionnaire (Barkley, 1997)

5. Informal behavioral observations during the interview of the parent-child interaction

Clinicians may also want to consider:

1. Measures of parent functioning (e.g., the Symptom Checklist 90—Revised, a measure of adult distress and psychopathology (Derogatis, 1983)

2. Measures of parent child interaction (e.g., the Parenting Stress Index) (Abidin, 1995)

3. Formal observations of the parent and child interacting using a system such as the Dyadic Parent-Child Interaction Coding System (see Hembree-Kigin & McNeil, 1995)

4. Classroom observations of the child

Once it is determined that the child and family are good candidates for parent training (e.g., child is young and exhibits acting out behavior, parent has no major psychopathology), the parents should be provided with a rationale for the use of this technique. Many parents who seek psychological services for their children may expect that the professional will meet individually with the child and that they, as the parents, will be only minimally involved in treatment. Providing a description and rationale for the use of parent training up front can help prevent confusion about services. In addition to emphasizing the effectiveness of this technique, clinicians should emphasize the role the parents play in the child's behavior. It is important not to blame the parents for the child's current behavior problems, but to relay the message that the parents' behaviors and response to their child can greatly affect the behaviors exhibited by the child.

Once the program has been explained to the parents and their questions answered, the intervention begins. If the child is from a two-parent home then it is ideal to have both of the child's parents involved. However, this is often not feasible because of scheduling problems or lack of interest on the part of one parent. If this occurs, then the clinician should encourage the attending parent to discuss techniques learned in session with the child's other parent. When only one parent attends, it is typically the mother. Although this is clearly not ideal, a review of paternal involvement in parent training (Horton, 1984) suggests that inclusion of the father does not provide clear benefits over conducting parent training with the mother alone. This review, though, is now dated, and as fathers are increasingly taking more of a role in childrearing, this may change. In addition, Horton does note that the general marital relationship as well as the father's support of the mother as she goes through the program are likely important.

Basics of Parent Training

Almost all parent training programs that focus on externalizing problems such as ADHD and conduct problems, follow Hanf's (1969) two-stage model described earlier. Although the positive reinforcement portion of the program is typically presented first, there may be situations in which the school psychologist would want to first cover the discipline component. For example, with children who demonstrate extreme levels of aggression reversing the order may be warranted (Hembree-Kigin & McNeil, 1995). Although there is little empirical research on the effects of ordering of treatment, at least one study (Eisenstadt, Eyberg, McNeil, Newcomb, & Funderburk, 1993) found that children improved regardless of the order of treatment stages.

During parent training four steps are followed in teaching the skills at both stages of the program:

1. Skills are didactically taught to the parents
    - Skills are verbally explained to parents
    - Parents are provided with handouts describing skills and given examples of techniques to be used

2. Skills are modeled
    - Clinician models skills with referred child *and/or*
    - Videotaped models used

3. Parents practice the skills in session and receive therapist feedback on their performance
    - Parents practice with their child *or*
    - In groups, role plays conducted with other group members

4. Between sessions parents practice learned skills at home and monitor their progress
    - Parents keep a written record of whether the skill was practiced
    - Parents note any difficulties they had using the skill

The feedback or coaching of the parents, which often takes place over multiple sessions, is an important part of the training and something that may be particularly difficult for beginning therapists (Hembree-Kigin & McNeil, 1995). Coaching can help parents correct problems immediately as well as help parents problem solve regarding child-specific issues and provide confidence to parents as they implement the learned skills. Additionally, directly assessing parent progress is important because parents are often not accurate reporters of their skill level and the problems that they are experiencing as they use the skills at home (Hembree-Kigin & McNeil, 1995). Further, parents may use a skill in what they believe is the appropriate manner when in actuality their use is not completely correct and is hindering their success.

Providing Attention/Praise/Positive Reinforcement

In the positive attention phase, parents are taught to provide attention and praise for positive child behaviors. Unfortunately, many parents of children with behavior problems neglect to attend to their children's appropriate behaviors. Parents often respond only to the most salient behaviors the child is exhibiting, which tend to be the negative behaviors. When the child is behaving appropriately, parents often fail to attend to this and assume that it is better to "leave well enough alone." Unfortunately, this creates an interaction in which the child is only receiving attention for negative behaviors, and, thus, these are the behaviors likely to increase (Patterson, 1982). Teaching parents to provide attention to positive behaviors not only increases the likelihood that these behaviors will increase in frequency but also is important as it helps teach the child what *to do*. Working only to eliminate negative behaviors serves only to teach the child what *not to do* without developing a repertoire of appropriate behaviors.

In most behavioral parent training programs, these positive skills are taught and practiced in the context of a play situation, sometimes referred to as the "Child's Game" or "Time-in" to reflect the positive, child focused aspect of this part of the program. For this activity, toys that can be used in a constructive manner are needed. Such toys include crayons and paper, Legos, Tinker-Toys, and wooden blocks. Toys that require little interaction between the parent and the child (such as most video games) or have structured rules (such as board games) are not appropriate. In addition, toys that are likely to promote aggressive play (e.g., army figures, toy guns) are not suitable for these activities. During this play context, parents are instructed to

1. Describe what their child is doing

2. Reflect verbal statements their child makes

3. Praise their child for appropriate behaviors

4. Ignore minor misbehaviors

5. Issue no questions, commands, or criticisms

These expected parent behaviors are similar across different programs and detailed descriptions and examples of each of the above can be found in most parent training manuals (e.g., Barkley, 1997; Hembree-Kigin & McNeil, 1995).

As with the introduction to parent training in general, it is important to provide parents with a rationale for the use of this positive play time. This rationale might include the following (Barkley, 1997; Hembree-Kigin & McNeil, 1995) points:

1. Positives can increase desired behaviors

2. Positives help teach the child what parents like and expect the child to do

3. Positives set the stage for a more positive and enjoyable parent-child relationship overall

4. Positives may help increase the child's self-esteem

Once the "Child's Game" has been explained and modeled for parents, they practice the skills in the session. It is important to acknowledge to parents that although this activity sounds easy to do, it really is not. In particular, parents frequently have a hard time avoiding questions and often feel silly or unnatural interacting with their child in this context. As parents practice these skills, the therapist provides feedback on the use of the skills as well as other factors that may impact the parent-child relationship. For example, when parents first learn these skills it is not uncommon for them to talk in a monotonous, unenthusiastic manner. It is important that parents be enthusiastic and positive in their tone of voice, as well as in what they say. Children are adept at picking up on parents' lack of genuine interest, which then undermines the whole premise of this positive time.

In addition to practicing these skills in session, parents are asked to practice at home by setting aside anywhere from 5–20 minutes each night to engage in this play activity. Different authors have differing recommendations on the amount of time parents should spend engaged in this activity at home. For example, Barkley (1997) recommends 15–20 minute sessions while Hembree-Kigin and McNeil (1995) recommend 5 minutes. No empirical guidelines exist to suggest whether longer times lead to more effective learning of the skills, but much research supports programs which use the 5 minute play time. Thus, it seems likely that 5 minutes is a sufficient amount of time. Further, setting the practice time at 5 minutes may serve to increase parent compliance with this practice. Of course, there is nothing wrong with the longer time either but parents are encouraged to be consistent and to make a commitment to set aside the same amount of time each night for these sessions. It is important that as the parents practice at home, one parent practices with one child. Ideally, if both parents are in the home, then both would practice these skills. Parents may apply these skills to other children at home in addition to the referred child but should make sure they practice with each child individually.

Commands/Discipline

Once parents have mastered the positive attention component, they are taught to give clear, specific, and appropriate commands. Commands should be given one at a time and should be stated as directives rather than questions or suggestions. Parents should also ensure that the child is physically capable of following through with the command (Hembree-Kigin & McNeil, 1995; Schroeder & Gordon, 1991). Once they learn to give appropriate commands, parents are taught to follow up on these commands with either positive reinforcement for child compliance or a consequence for noncompliance. Time out is the most often used consequence for non-compliance and is generally quite effective with younger children.

As with teaching the positive skills it is important that these discipline skills be modeled for parents and that they have the opportunity to practice these skills in session. Particularly with time out, parents often report that they use this technique but that it does not work. Most frequently this is because the parent is not using the technique in an appropriate manner. Common mistakes parents make when using time out include:

1. Continuing to talk to their child while the child is in time out (thus negating the time out or time away from attention aspect of this technique)

2. Leaving the child in time out for excessively long periods of time

3. Not staying close by to insure that their child remains in the time out location

Although it is not always possible to get a child in time out in the therapy session, this is the ideal so that parents can be coached through their first use of time out and problems can be dealt with in session (Hembree-Kigin & McNeil, 1995).

Time out may not be appropriate for older children, and some other discipline strategy may need to be implemented. Contingency contracting, either through a comprehensive token economy system (such as that discussed by Barkley, 1997) or a simplified response-cost system, is commonly used. In such a system, parents list the privileges children can earn for appropriate behaviors and the privileges that will be taken away for inappropriate behaviors. Another technique that may be used with older children is "job card grounding" (Christophersen, 1988). When using this technique, children are not allowed certain privileges until they complete brief chores (e.g., dusting the furniture in the living room, sweeping the kitchen floor). Thus, the actual time the child is "grounded" is kept to a minimum and is easier for parents to enforce. In addition, the child has control over the length of time grounded. If the child completes the job(s) immediately, then the grounding lasts only a short time. If the child does not complete the job(s) immediately, then the grounding will last considerably longer.

Promoting Generalization/Maintenance

Once parents have mastered the basic skills, it is important to help them implement these skills in situations outside the home. Public places such as stores and restaurants provide unique challenges to parents and should be addressed during parent training. Most parent training programs offer some guidance on how to deal with these problems. Parents are typically instructed to develop rules for situations ahead of time as well as incentives for appropriate behavior and discipline techniques for inappropriate behavior. Time out can be used in public, but it is important to ensure that parents have mastered time out at home before having them use this technique outside the home.

As was noted earlier, behavioral improvements seen in the home after parent training often do not generalize to other settings. To help promote generalization, school psychologists conducting parent training may want to consider building a school component into their program. This could be done in a number of different ways including

1. Providing similar training to teachers in a group format over a series of in-service training sessions

2. Consulting with the individual child's teacher on a regular basis and helping the teacher develop a parallel program adapted to the classroom setting

3. Using a home-school note system in which performance on target behaviors at school are tracked by the child's teacher(s) on a written form (e.g., Kelley, 1990), which is then taken home at the end of each day where parents provide consequences for meeting behavioral goals or not meeting these goals

Of the above solutions, the home-school note system is the only one that encourages active communication between the parents and the school. In this system parents are informed on a regular basis of what is happening at school, and they are involved in remediating problems there as well as at home. Thus, if increased school-home collaboration is a goal of treatment, this program should be considered.

In addition to helping parents generalize the skills they have learned, school psychologists should build in a system to help parents maintain skills. One option is to continue having brief meetings with parents on a regular basis (monthly or bi-monthly) so that skills can be reviewed and any problems parents may be having can be addressed as needed. Unfortunately, there is little empirical research regarding the best way to promote maintenance of treatment gains or what factors contribute to the maintenance of gains (Eyberg, Edwards, Boggs, & Foote, 1998).

Addressing Parent Issues

As was noted earlier, most parent training programs do not specifically focus on parent problems (e.g., marital distress, depression). However, parental issues can greatly impact the parent-child relationship, and, thus, directly focusing on these issues may increase the overall effectiveness of a parent training program. There are a limited number of studies that have found support for the idea that general parent training by itself can decrease parental stress and improve parental efficacy/self-esteem (Anastopoulos, Shelton, DuPaul, & Guevremont, 1993; Pisterman et al., 1992; Schuhmann, Foote, Eyberg, Boggs, & Algina,1998). Whether parent training has an impact on more severe parent problems, such as depression or marital problems, is less clear. Studies looking at families with marital problems (Dadds, Schwartz, & Sanders, 1987) and maternal depression (Chronis et al., 1999) found that specific components to address these issues were needed and that parent training alone was not enough to alleviate these problems.

Although in a clinic setting, a psychologist may provide add-on components that address parental issues specifically, it is unlikely that this would occur in a school setting. School psychologists who are providing parent training and realize the parents are struggling with issues not adequately addressed through parent training should refer these parents to psychologists in the community. These additional services may provide more benefits to the family as a whole and may help prevent premature termination of parent training (Kazdin, Mazurick, & Bass, 1993; Prinz & Miller, 1994).

Adapting for Group Training

Although the above information has been presented primarily in the context of conducting parent training with individual families, as mentioned earlier parent training can also be conducted in a group format. The concepts that the parents learn in group training and the manner in which these concepts are taught is very similar to what occurs in individual parent training. The main differences relate to the child not being present. Thus, the modeling and practicing of skills is not conducted directly with the child but through other methods such as videotapes and role plays. In addition, clinicians need to be aware of group dynamics and ensure that all parents are actively involved in discussions and role plays.

Webster-Stratton's videotaped-based program mentioned above is one of the most well-researched group programs (Webster-Stratton & Hancock, 1998). This program follows the same outline as that described for individual parent training in terms of teaching positive attending skills through a play context and then teaching discipline skills. Webster-Stratton has also developed a companion program that focuses more on parental issues (e.g., coping skills, problem solving, communication, anger management) which addresses some of the family / parent issues discussed earlier. The addition of this component has been found to produce additional benefits for participants, particularly on measures of parent behaviors, when compared to the basic parent training program (Webster-Stratton, 1994).

When using group parent training, Webster-Stratton has found that programs including videotape models are superior to group instruction without the videotapes (Webster-Stratton & Hancock, 1998). Thus, clinicians conducting group programs should consider the addition of videotaped models that allow parents to see examples of the skills in use. Webster-Stratton also incorporates role-play exercises in her program, thereby allowing parents to have some experience practicing the skills and receiving feedback on the skills prior to using them at home with their children. Homework, in the form of parents practicing the skills and reading materials related to what is being learned in session, is also assigned on a regular basis. In addition, some follow up with the parents individually, such as occasional phone calls that Webster-Stratton recommends, may be beneficial and help clinicians track progress of parents who may be less involved in group sessions.

SUMMARY

Parent training is an effective short-term intervention for use with families with children exhibiting disruptive behaviors. Although parent training is often discussed as an intervention for use in clinical settings, parent training can easily be conducted in school settings, and these settings may be particularly conducive to group parent training. As school psychologists continue to expand their roles in the schools and become more involved with the provision of mental health services, it is likely that parent training will become an intervention increasingly used in the schools.

Particularly in elementary schools, many referrals for mental health problems involve externalizing problems. Because these are the disorders that are most conducive to parent training, school psychologists should strongly consider the use of this intervention for these referrals. It is also important to intervene early, and school psychologists should not assume that behavior problems exhibited by young children will improve without intervention. Although classroom-based interventions may seem more manageable, to have the maximum impact and improve the long-term outcomes for the child working with the parents is of utmost importance. Child behavior problems are often exacerbated by unhealthy parent-child interactions, and if this pattern is not broken, then it is unlikely that the child's behavior will improve.

When conducting parent training, school psychologists should keep in mind that the model presented in this chapter, involving teaching parents to use behavioral principles in the form of positive reinforcement and punishment (response cost), have the most empirical support. Thus, it is recommended that school psychologists use a program based on these principles. It is important, though, that psychologists buy into and believe in the principles used in these programs. Otherwise, it is likely that they will be ineffective in their presentation of such techniques. Psychologists should also transfer this basic behavioral knowledge to parents as they are describing the skills involved in the program. Parents should not simply be taught how to reinforce and how to discipline, but should also learn the rationale behind the use of these methods. Parent training is more than technique teaching. It is intended to give parents a better understanding of the parent-child relationship and the factors that contribute to that relationship. This understanding, along with the techniques, will have a lasting impact on parents and their children.

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Barkley, R. A. (1997). *Defiant children: A clinician's manual for assessment and parent training* (2nd ed.). New York: Guilford.
This manual provides a comprehensive description of Barkley's parent training program. The manual begins with background information on noncompliance/defiance and the associated problems of children and their families as well as assessment of defiant children. A step-by-step description of the parent training program is then provided. The description of each step begins with an overview of the goals for the session, the material required, an outline of the topics to cover in session, and the homework for the parents. Following this, a detailed description of the session is provided. Also included in the manual are forms that can be photocopied. These include assessment measures as well as parent handouts for each step of the program. A Spanish supplement of this manual is available that contains Spanish translations of the assessment materials and parent handouts.

Barkley, R. A., Edwards, G. H., & Robin, A. L. (1999). *Defiant teens: A clinician's manual for assessment and family intervention.* New York: Guilford.
The program described in this manual is an upward extension of Barkley's Defiant Children program described above with the addition of "problem-solving communication training." There are 18 steps in this program with the first 9 steps being direct adaptations of the Defiant Children program and the last 9 steps focusing on "interpersonal skills needed by the parents and teen to develop better conflict resolution" (p.79). As with the Defiant Children program, handouts for parents (and in some cases for the adolescent) are included in the manual, and these can be photocopied.

Briesmeister, J. M., & Schaefer, C. E. (Eds.). (1998). *Handbook of Parent Training: Parents as co-therapists for children's behavior problems* (2nd ed.). New York: Wiley.
This book is an excellent resource for those interested in the use of parent training across a number of different problems. Each of the 17 chapters discusses the use of parent training with a specific population, and each chapter is written by an expert in that area. In addition to chapters on externalizing behaviors (e.g., ADHD, conduct problems) there are also chapters on internalizing disorders (separation anxiety disorder and school refusal) as well as other disorders (e.g., enuresis, developmental disabilities, sleep problems).

Hembree-Kigin, T. L., & McNeil, C. B. (1995). *Parent-child interaction therapy.* New York: Plenum.
This book provides a detailed description of parent-child interaction therapy (PCIT), as developed by Sheila Eyberg. The first chapter of this book discusses the foundations of PCIT, and the remaining seven chapters are devoted to detailed descriptions of the steps in the program. In their descriptions of the program components, the authors provide a great deal of information in terms of what to actually do with parents and say to parents in sessions. Their examples from their own experiences in conducting PCIT are helpful. Included in the appendix of this book are assessment measures that they use when conducting PCIT as well as parent handouts on each step of the program.

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ent Training: Parents as co-therapists for children's behavior problems (2^{nd} ed.) (pp. 98–152). New York: Wiley.

This chapter describes Webster-Stratton's videotaped-based parent training program. Information on the effectiveness of the program is presented followed by descriptions of both her BASIC parent training program and her ADVANCE parent training program. Included in this chapter is a discussion of videotape models and their use in parent training sessions. More information on this program (including information on ordering the manuals and videotapes used in this program) can be found at the following website: www.incredibleyears.com.

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Charter Schools, School Psychologists, and the Potential for Best Practice Implementation

Caven S. Mcloughlin, Melissa Lewis, and
Carrie Hutchinson
Kent State University

OVERVIEW

Unlike many chapters on school psychologists' responsibilities for enhancing school-based best practice, this contribution focuses in large part on understanding the means used by charter schools (sometimes called "community schools") to ensure student success, along with the motivations of those who patronize them. One purpose is to introduce a movement with powerful allies that is gaining broad acceptance so as to better understand the forces that have relevance for *any* school undergoing reform. A further purpose is to identify potential niches that might be served by school psychologists within the charter movement even at this relatively late stage in the movement's development.

Since many parents are finding charter establishments the more appealing among their school choice options, all educators, *especially those serving public schools*, have a professional obligation to investigate this growing phenomenon. The successes wrought by charter arrangements may contain valuable lessons for public school psychologists who aim to garner broad base parent support. And the employment opportunities for school psychologists can only be enhanced through contemplating whether there is a complementary role for school psychologists in this sector of "independent education."

School psychologists have not broadly endorsed the educational reforms being promoted under the aegis of charter education. There are more unanswered questions about the role of the school psychologist in charter education than there are answers. There is almost no established empirical support for wide ranges of disparate educational practice that are being incorporated into such schools. In a profession bounded by a reliance on decision making that is grounded in empirical support, school psychologists have largely taken a wait and see approach to implementing alternatives to the traditional public model. This is entirely understandable in light of the fact that the charter philosophy allows charter operators to selectively engage only the services of professionals they view as significant to their own educational establishment. Few charter operators currently seek out school psychologists as problem solvers for their schools except where mandated as part of the special education program requirements.

School psychologists have yet to craft a clear role or vision for providing service to the charter education movement. The very nature of charter schools as an alternative to the standard system encourages a hands-off approach by a group of professionals almost exclusively employed, from a historical perspective, in the public domain. In fact, few school psychologists have accepted leadership in shaping the alternative school reform movement and as a consequence relatively few niches have been carved for school psychological services or mental health professionals.

To date, school psychology's role toward the independent schools movement has largely been *reactive* to changes imposed by circumstances crafted by political entities marginal to the educational mainstream. This avoidance of direct involvement mirrors the distance that some educator-unions intentionally imposed when charter schools were mooted, the widely accepted logic being that if left to survive on their merits the charter schools would fail and the status quo would return by default. In their case, the rationale for non-involvement was the lack of supporting evidence for this alternative approach, and proprietary concerns about hiring practices and flexible licensure requirements for professional staff.

These concerns remain largely unaddressed; that is, there is still almost no data set endorsing charter education as a viable educational alternative *on its merits*, and charter establishments continue to hire individuals without formal qualification in critically important positions guiding children's education. Nonetheless, it was hardly imagined that charter education would catch the imagination of a section of the nation's parents and become the fastest growing segment in contemporary educational service.

The window of opportunity for school psychology to have an influence on the organization, goals, and procedures in charter education is fast closing. Business entities, including those founded on the profit principle, have already honed their business/education model for franchised charter establishments. School psychology is never or only rarely included. Nonetheless, the Achilles heel for the charter movement is demonstrating satisfactory progress toward their agreed goals; that is, the standards of the charter against which they must perform. The quality of data yet available to support any contention of superior quality education from charter establishments is speculative, faith-based, and largely anecdotal. So far, this quality of information has sufficed. Should harder data be required to convince State Boards of Education or other governmental agencies of the viability of the charter model, then their proponents will need to turn to professionals with the research skills common in school psychology. Accountability studies may become the entry point for school psychology, rather than expertise in special education service provision.

What are Charter Schools?

Charter schools are publicly funded, non-sectarian schools that operate free of the many regulations, restrictions, and mandates of traditional public schools. Charter schools operate as separate legal entities designed and operated by educators, parents, and community members. They comprise one of the fastest growing "alternative education" service options (exceeded only by home schooling). Almost universally, parents who send their children to charter schools say they are seeking a better educational experience. In a majority of cases, these parents are dissatisfied with the public school system but cannot afford the route of a private or religious-foundation school. The draw of a charter school is that it is funded by public money, but does not have the same constraints as a public school. Charter schools also may offer a greater variety in curriculum for children who have been unsuccessful in the public school districts and are perceived to have been held back by an inflexible traditional system.

Many reports have identified the availability of *options* as the factor making charter schools appealing to parents. The important question is *why*? What is it that makes parents and other educators want to embrace this alternative education movement? While voluminous research points to individualized education as being successful for many children who have experienced failure in the mainstream, the major issue is what makes this particular alternative option so successful? Many skeptics say that the reason for the success is that alternative schools lack adequate demands for accountability. Accountability, the measures used to demonstrate success, is thus an important issue to consider.

This chapter considers the following issues: Factors that make charter schools appear successful; accountability in the presence of autonomy; characteristics of charter school students, particularly those with disabilities; and the foci, interests, and motivations of both parents and administrators who choose this route to an alternative education. Many misconceptions concerning charter schools exist because most public school educators live and work in an entirely different arena, and these misconceptions are also addressed. The role of the school psychologist in charter school service is only indirectly addressed because there are so few examples on which to draw. The reader should contemplate a potential role—typically one yet undefined—for professional school psychology in the service of charter schools.

BASIC CONSIDERATIONS

What is a Charter School and Why are They Established?

Charter schools are independent, but public, schools that operate under a time-limited contract between the school's developers and a sponsoring organization, typically a local education authority, school district, or a state school board. Charter schools are similar to other public schools in that they are funded through the state, subject to federal law, and are nonsectarian, tuition-free, and prohibited from discriminatory student admission procedures. However, it is at this point where the similarities end. The major difference between a charter and a traditional public school is that a charter school is an independent legal entity that has autonomy over every aspect of its own operation. In exchange for this self-determination, charter schools are held accountable for meeting the educational goals that are written into their charter, and freed from rules but ostensibly accountable for results (Bierlein, 1997; Manno et al.,1998a; Manno, Vanourek, & Finn, 1999; Nathan, 1996; U.S. Department of Education, 2000). In summary, charter schools are generally free from the bureaucratic controls imposed by a locally elected school board, free to decide what to teach and how to teach it, free to decide whom to hire and how to deploy resources, free to decide what hours to operate and how best to meet the needs of its student body, and yet are funded from the public purse.

In 1989 Ray Budde authored *Education by Charter: Restructuring School Districts* (Budde, 1989). In this book he named and defined the charter school concept, and in case study format followed a new superintendent who provided school board members and staff with a vision of how to restructure a school district over a decade. The impetus started with a gradual shift of the "responsible control" for the entire function of instruction to those who teach. The school board accomplished this shift by granting 3- to 5-year "charters" to educators who were organized according to subjects, grade levels, and schools.

Shortly after Budde's 1989 publication, Albert Shanker received national recognition for popularizing an understanding of charter schools through speeches to Washington media groups and through *New York Times* articles. He called on teacher unions and local school boards to endorse the charter movement and celebrate innovation in educational instruction and programming. However, his call fell on the deaf ears of the membership of teacher "associations" skeptical about the inclusion of individuals without formal teaching credentials, management by non-educators, salary based on results, the availability of a for-profit motive, and the failure to include tenure protections in charter establishment employment contracts.

The modern charter school movement began in earnest in 1991 when Minnesota enacted the nation's first charter school law. Since that time, 36 states and the District of Columbia have adopted charter school legislation, and 32 states have opened charter schools. Charter schools are a rapidly developing sector of the educational services options, having grown to approximately 1,700 schools that enroll some 350,000 students, and accounting for approximately 1% of all public school students within those states operating charter schools. Public demand for charter schools has not been satiated, and 7 out of 10 charter schools report that they have waiting lists (U.S. Department of Education, 2000; Charter Friends National Network, 2000).

Educators, parents, and organizations (both profit and non-profit entities) have founded charter schools. In general, founders share a frustration regarding the confines of the traditional public school system. Specifically, founders of charter schools say that they develop their schools to "realize an alternate vision for schooling" (75%), "for autonomy" (17%) and "to serve a special population" (30%) (U.S. Department of Education, 2000). The motivations include

1. A passion to serve children's educational needs with novelty and unfettered access to innovation.

2. A desire to reflect in the educational curriculum the tenets, beliefs, history, and content-specific analogies drawn from a particular racial, ethnic heritage (often called an "ethnic-charter").

3. A wish by disaffected educators to try another way to get their message across to students (a "conversion charter").

4. A profit motive—typically by those individuals aiming to capitalize on their identification of perceived wasteful procedures in the time-honored public model.

5. A need expressed by disgruntled parents dissatisfied with the current public alternatives (Schneider, 1999).

For parents, the allure of charter schools is the prospect of having a non-fee–based alternative to a traditional public school system, a system typically perceived as having failed their children. Specifically, parents with children in charter schools cite higher academic standards, a reduced overall school census with smaller classes, a more compatible educational philosophy, and better educators as their reasons for selecting a charter over a typical public school (Manno et al., 1998a).

Two basic types of charter schools exist: conversion schools, which were once either traditional public or independent schools (private) before converting to charter status, and new schools, which come into existence as a result of their charter (Manno et al., 1998b). Charter schools serve as public institutions being financed with tax dollars and accountable to public authorities for their performance. In parallel, these hybrid-public schools receive freedoms similar to proprietary independent schools: (a) self-governance, in that they are free to reach their educational objectives however they choose; (b) freedom from many regulatory demands; (c) absolute selection and control of their own curriculum, staffing, budget, and organization; and (d) some choice in which children attend their school.

How are Charter Schools Managed and Organized?

SCHOOL SIZE

By virtue of their freedom to be self-determining, there is no typical model for charter schools. However, some similarities exist across charter schools. In general, charter schools are relatively small. In 1998–1999 the median number of students in charter schools was 137 in comparison with the 475 median for all public schools. Newly opened charter schools tend to be even smaller, their median enrollment being fewer than 100 students per school at their founding. In turn, this contributes to a lower student/educator ratio. In 1998–1999, the student-teacher ratio for charter schools was 16.0 in comparison with 17.2 for public schools (U.S. Department of Education, 2000).

MISSION AND CURRICULUM

By their very nature, charter schools tend to be innovative in their mission, and therefore tend to reflect a diverse curriculum. In many cases, educational programming is inventive and novel, apparently unhampered by adherence to the canons of educational lore. Other charter schools reflect models of existing alternative schools (e.g., Montessori, magnet schools).

EDUCATIONAL LEADERSHIP

The educational leadership and personnel management of charter schools also reflect variety. Individual administrators whose primary motivation is to have an opportunity to achieve excellence and escape the constraints of traditional schools head a majority of charters schools. Some charter schools outsource a significant portion of the managerial duties and responsibilities to third parties, while others have a single person or a large board who manage the school (Manno et al., 1998b).

STAFFING MODELS

Because charter schools in most states are exempt from the state's requirement for licensed educators, charter schools maintain staffing plans unhampered by the demands to hire certified individuals with any formal education in the subject area they teach or the work they perform. In many cases the fact that their teachers are *not* certified or licensed by a state agency is a point of pride. Particularly in chartered religious foundation establishments, it is the individual's acceptance of specific religious tenets that provides them the necessary credibility to teach the general curriculum.

FACILITIES

Facilities vary widely, especially in the case of start-up schools. Some schools have access to an unused school facility while others are forced to opt for storefronts or, in some cases, "schools without walls" (Manno et al., 1998b). This has led to problems with safety, building, and disability-access code violations and related problems associated with the public congregation in marginal facilities.

SCHEDULING

Charter schools have been equally creative in their scheduling practices, largely possible because charter schools are not mandated to be open a minimum or maximum number of hours per day (or even to maintain set hours each day). Many charter schools schedule longer school days and years, some add a weekend school day, and a few are functional 24 hours/7 days a week. "Wraparound" child-supervision (i.e., before and after school child care) is available in almost three-quarters of charter schools as an additional service to employed parents (Manno et al., 1998b; U.S. Department of Education, 2000).

TECHNOLOGY

In conjunction with the innovations in scheduling and facilities, many charter schools have devised unique ways in which to integrate technology more efficiently than have their traditional counterparts (Manno et al., 1998b). In 1998–1999, the estimated mean student-to-computer ratio in charter schools was 8.9 in comparison with the estimated average for all public schools of more than 10.0 (U.S. Department of Education, 2000).

PARENT INVOLVEMENT

Charter schools incorporate many ways to encourage parental involvement, including parent mentors and classes taught either for or by parents (Manno et al., 1998b). Moreover, one of the highest levels of parental satisfaction with charter schools comes from their involvement of parents. More than 60% of parents say that the charter school is better at involving parents than was their child's previous (public) school (Manno et al., 1998a).

FISCAL MANAGEMENT

One of the greatest problems faced by charter schools relates to financial management, budgeting, and ongoing fiscal stability (Manno et al., 1998a). Although 73% of charter schools have primary control of their budget (U.S. Department of Education, 2000), and all are in imminent danger of closing if they are not fiscally sound (Bierlein, 1997), the vast majority of charter schools are administered by people with little or no business expertise (Bierlein, 1997). Furthermore, charter schools receive less per capita funding than do traditional public schools and, unlike their traditional counterparts, are expected to produce results or face closure (Manno et al., 1998a). Thus, in response to these fiscal demands, charter schools have needed to employ creative budgeting and reporting strategies to manage their resources, including partnering with both for-profit and nonprofit companies and outsourcing for professional as well as management services (Manno et al., 1998a).

Who Attends Charter Schools?

Critics of charter schools fear that they will be bastions of elitism admitting only the cream of the crop into their schools (Vanourek, Manno, Finn & Bierlein, 1997a). Investigation, however, shows that this is hardly the case. In the Hudson Institute's study of charter schools, parents reported that their children had behavioral problems (11.5%), learning disabilities (9%), and physical disabilities (2%) at point of entry (Vanourek et al., 1997). Moreover, the children in these charter schools were more likely to be members of an economically fragile or racial minority group than were their counterparts in all public schools (one-half compared with one-third). Furthermore, many of these children came from low-income households; for example, 41% of families in the Hudson Institute's study had annual incomes under $30,000. The U.S. Department of Education's most recent survey of charter schools supports the Hudson Institute's findings. They found that charter schools enrolled a smaller percentage of white students than all public schools (50% compared with 63%), served a slightly higher percentage of students who were eligible for free or reduced price lunches (39% versus 37%), and enrolled only 3% proportionally fewer students with disabilities than did public schools (U.S. Department of Education, 2000).

IS THERE AN UNTAPPED NEED FOR SCHOOL PSYCHOLOGISTS?

While, on the surface, the fact that charter schools enroll fewer students with disabilities may seem evidence that the schools are discriminatory in their admissions. To the contrary say the charter school proponents, who assert that they develop individualized plans for every student thereby avoiding a special education label and its presumed stigma (Vanourek et al., 1997).

In these settings school psychology's problem-solving procedures may be attempted but rarely are codified within a formal individualized educational plan (IEP). Interventions are implemented but not evaluated with the depth or frequency required by recognized IEPs. Furthermore, since many charter schools are founded specifically in order to serve a special population of students at educational risk, it would seem a natural outlet for psychology services to schools. However, there has been a marked reluctance to employ psychologists. This reluctance may stem from a discomfort with the *psychology* element in the professional title. Even in those schools where students are selected on the basis of their acting-out behaviors that may co-exist with emotional disturbance, it is routine to decline the services of a mental health provider in favor of a "behavior management specialist."

BEST PRACTICES FOR SCHOOL PSYCHOLOGY IN CHARTER SCHOOLS

Understanding the Challenge of Autonomy Versus Accountability for Charter Schools

The difficult-to-pinpoint element in any comparative analysis of different forms of service delivery is embedded in answers to the question of, *What comprises success for charter schools?* Success is mentioned repeatedly as a criterion for continuation of a school's charter, and therefore appreciating its significance to charter schools is crucial. Clearly, success means different things to different people. For the purposes of this discussion, success will mean that students acquire the academic and social skills necessary to be viable, independent members of society. This definition still leaves significant components to decipher. Academic success encompasses all school subjects and related material. Social success includes getting along with others, acting responsibly for self and others, being able to function in many different settings, and understanding consequences.

Accountability, in this context, refers to a school's ability to lead their pupils to demonstrate competency in the educational realm and preparedness for transition into the world of work. Public schools are subject to reviews and audits and similar procedures such as proficiency tests to demonstrate that children are learning appropriately. Not only do public schools have to show that their children are learning, but they have to show that the teachers are using any state-mandated curriculum that exists. Charter schools do not have this same measure of accountability, and states vary widely in what measures they expect alternative forms of education to complete.

As was discussed earlier, the basic premise of charter schools is the freedom to realize the goals of the charter by whatever means the school's administration sees fit. In return, charter schools are held to a *higher standard* of accountability for academic results than are traditional public schools. Therefore, if the school fails to meet the goals specified within its charter, the charter-granting agency may close the school by revoking its charter upon review (Hassel & Vergari, 1999). This high-stakes penalty is markedly absent in most summative reviews of traditional public schools. Charter schools must therefore be able to make a persuasive case for the renewal of their charter.

A charter school's ability to prove itself as successful begins at the state legislative level. The best charter laws establish explicit provisions for evaluating a school's effectiveness. According to Manno et al. (1998a, p. 558), these provisions include

1. The school must produce satisfactory academic achievement by its students on state- or district-wide tests and similar measures.

2. The school must demonstrate success in meeting its own goals—academic and other—as set forth in its charter or contract.

3. The school must use public funds responsibly.

4. The school must comply with all applicable laws and regulations (such as public health, building code, due process, and civil rights) that are not waived for charter schools.

In 1996, the American Federation of Teachers found that only 17 of 25 states that then had adopted charter legislation required charter schools to use the same proficiency tests as other state public schools to document student achievement (American Federation of Teachers, 1996). Manno et al. (1998a) conclude that most states are accustomed to rule-compliance rather than an academic-accountability system and that most states are still in the process of developing standards for testing the academic achievement of students enrolled in their *traditional* public schools, let alone in charter schools (Manno, 1997). In essence, most states are simply unprepared to evaluate a school on the basis of academic achievement (Hassel & Vergari, 1999). However, without the use of comparable measures, it is fundamentally impossible to gauge the academic effectiveness of charter schools relative to other schools on a district-, state-, or nation-wide level.

How then can we decide which schools have and which have not lived up to their contract? Without specifying these important details, charter schools may be destined to fail from the outset. Even within states that have comparable mandated standardized tests for all public schools, the problem for many charter schools is not solved. Hassel found that 75% of charter schools utilize the same tests that are used by traditional public schools in their state (Hassel & Vergari, 1999). However, because of the vastly different curricular objectives of charter schools, state standardized tests are highly likely to be inappropriate and ineffective for assessing the academic achievement of charter school students whose curriculum did not reflect the content or information the test evaluated (Hassel & Vergari, 1999; Manno, 1997).

In an attempt to counter inadequate regulations, it is important for charter schools to make written provisions for accountability within their charter application and to have an internal monitoring system in order to ensure the goals are being met. Ideally, Hassel and Vergari (1999) have suggested that schools should detail explicit and measurable academic goals within their charter application. Additionally, schools should develop internal monitoring strategies that track school performance and student performance in order to highlight *early* signs of trouble within the school (Manno, 1997). Both Hassel and Vergari (1999) and Manno (1997) have expressed concern that, because of a general lack of expertise among charter school founders in crafting feasible academic goals, some stipulations may be virtually unobtainable from the outset.

Charter schools employ a range of systems to track student performance. Almost all utilize standardized assessments (96%); 89% use student demonstrations of their work; 81% utilize student portfolios; and performance assessments are used by 74% of charter schools. Again, almost all (94%) use a series of alternative assessments and display progress and accountability through multiple forms of student assessment (U.S. Department of Education, 2000). While most of these non-standardized methods of performance assessment may be more compatible with a charter school's mission and philosophy, such methods usually do not allow for easy comparison with traditional schools' outcomes.

Charter regulations call on schools to agree on accountability plans that show the kinds of progress in student performance that need to be attained for the charter to be renewed. Once the achievement goals are agreed upon, it is then up to the charter teachers to implement a model curriculum for attaining those goals. The major frequent complaint from public school education boosters, and those unsupportive of the charter movement, is that the goals are poorly articulated. As already noted, while some charter schools participate in the same statewide tests that are completed in public schools, others do not. This provides an unsystematic view of students' achievement in charter schools.

The Supporters and the Critics

Those who argue in favor of charter schools point to the presumed benefits of competition, democratic choice, and additional options for parents in the selection of educational settings for their children. They note that charter schools foster innovation and suggest that this reflects significant improvement in the learning environment.

The detractors decline from viewing the relatively few charter settings as either "competition" or as beneficial, saying that their existence is a drain on the public purse that supports traditional neighborhood schools. They also point to a nationwide lack of physical facilities of adequate standard for children's education and attest that virtually every educational innovation or reform evident in charter settings can be readily duplicated within existing public settings. Thus, they say, charter schools are unnecessary. Detractors also cite elitism, inattention to diversity, and neglect of equity issues as points of contention.

Both charter enthusiasts and opponents tend to depict charter schools as evidence of revolutionary change, a policy earthquake, and unprecedented and heretofore unimaginable innovation. Both groups are standing too close to the objects they are describing, suggest the authors of *Charter Schools in Action* (Finn, Vanourek, & Manno, 2000).

What is the Impact on Student Achievement?

Given the roadblocks to comparing charter school students to their peers in traditional public schools, how then are charter school students performing? The quick answer is that it is just too soon to tell. Because charter schools as a whole are so new, it is virtually impossible to know what effect they are having on their students (Hassel & Vergari, 1999; U.S. Department of Education, 2000; Manno et al., 1998a). In addition, Vanourek et al. (1997) warn against judging the academic performance of schools in their early years, since scores may be more of an expression of what the student brought from his or her previous educational experiences rather than a measure of the gains or losses since enrollment.

Although quantitative outcomes may be premature, charter schools are taking some qualitative reporting steps to describe measuring student achievement. For the most part, these performance indices consist of self-report data. The U.S. Department of Education (2000) found that charter schools are using parent and student surveys as indirect approaches to measuring their system-wide progress (83% utilized parent surveys; 71% used student surveys). Manno et al. (1998a) found that satisfaction among parents (another popular indicator of school success) was quite high. Among parents who reported their children were performing poorly at their previous school, 44% believed that their child was doing "excellent" or "above average work" in the charter school. Similarly, children in charter schools believed that they were improving academically. Of those who rated themselves as having achieved "poorly" at their previous schools, 45% felt they were doing excellent or above average work in the charter school (Manno et al., 1998a). Further, 38% of parents with children in special education rated their child's performance as either excellent or above average (only 16% felt their child's performance was excellent or above average in his or her previous school) (Manno et al., 1998a). The lengthy waiting lists for most charter schools serve as an additional, albeit indirect, measure of the public perception of their performance (U.S. Department of Education, 2000; Vanourek et al., 1997).

Some preliminary data regarding established charter schools is available. Vanourek et al. (1997) report that academic gains were larger than typically found in traditional public schools for six of eight Massachusetts charter schools that were tested. Further, in a 1996 pilot administration of the Minnesota basic graduation test, two out of three charter schools had greater percentages of passing scores in Reading and one in two in Mathematics than other schools in the host district (Vanourek et al., 1997).

What is the Impact on Traditional Public Schools?

The charter school phenomenon has many potent implications for *the revitalization of America's traditional public schools* (Manno et al., 1998b). First, since competition promotes change, charter schools have forced their traditional neighborhood schools to engage in self-analysis and enact modifications reflecting continuous quality improvement. Second, charter schools tend to be more consumer-oriented than producer-oriented. That is, charter schools focus upon keeping parents and students satisfied, whereas traditional public schools have tended to be more concerned with employee satisfaction and maintaining the goodwill of "expert judges" such as accreditation bodies, teacher-educators, and national learned societies. The radical growth of charter schools has encouraged traditional neighborhood schools to recognize the power of the customer and involve them as stakeholders and change-agents in their school's day-to-day management.

CHOICE

In addition, charter schools have widened educational choice for all families. Unlike most traditional public schools, charter schools realize that the needs of families, even low-income families, demonstrably differ. Thus, charter schools represent an economic alternative for any family whose child is not thriving in a traditional public school. Charter schools' freedom to be flexible leaves many of them more prepared to adapt to changes that occur in their student body, families, and communities than is true for their public counterparts (Manno et al., 1998b; North Central Regional Educational Laboratory, 2000).

CLIMATE

Another possible insight for public school personnel, particularly school psychologists interested in promoting school safety, is the intimate climate that most charter schools manage to create. Even the largest of the charter schools are organized specifically to encourage regular and direct contact among stakeholders. Since charter schools are voluntary, everyone at the charter school, from the students and their families to the educators and administrators, wants to be there. In turn, this enables charter schools to build stronger school communities. It may also be that the

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sense of community fostered within the relatively small charter schools further enhances their school community's safety.

ACCOUNTABILITY

One of the most critical implications for traditional public schools is embedded in the concept of *accountability*. Charter schools are accountable for their results and face serious consequences if targets are not met. This is not the case for the majority of traditional public schools where continued financing is never at risk even in the face of deplorable academic outcomes. In a real sense, charter schools may be subject to the greatest consequence of all for failure; that is, charter schools are voluntary and therefore students and staff may leave and, in the end, the school may lose its charter and be forced to close if the results specified within its charter are not produced. However, this penalty has very rarely been enacted. Since 1991 there have only been four schools closed for failure to meet their charter (although many have voluntarily closed their doors for unknown reasons). Nonetheless, as Ravitch and Viteritti (1997) suggest, "the very existence of such schools will cause educators within the existing system to demand clearer standards by which to measure school performance" (p. 14).

STAFF

Finally, charter schools, unlike traditional public schools, have liberty in the area of staff selection. As was discussed earlier, charter schools are not limited to hiring only certified or licensed teachers and support personnel. In addition, charter schools are free to make their own decisions about workloads and compensation. Such issues have important implications for educators in traditional public schools and for their negotiating units nationwide.

What is the Responsibility of Charter Schools to Students With Disabilities?

Special education is the domain in which charter schools are most required to function like traditional public schools (Vanourek et al., 1997). As public schools, charter schools are required to comply with the Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990 (Ahearn, 1999; U.S. Department of Education, 1998, 2000). Thus, it is imperative for charter schools to address responsibly the special education needs of their students (Manno, Vanourek, & Finn, 1999) while at the same time keeping in mind that no school, charter or otherwise, can accommodate every need of every disabled child.

It is important for charter schools to ensure that students are not denied admission on the basis of a disability and that they provide both due process and the appropriate staff to execute each students' IEP (U.S. Department of Education, 1998; Manno et al., 1999).

Specifically, the IDEA Amendments of 1997 refer to charter schools in three sections:

1. Section 611 (f):(4)(A): Authorizes grants to be made to a state, "In any fiscal year in which the percentage increase of the state allocation under this section exceeds the rate of inflation" (Ahearn, 1999). The state, in turn, shall make sub-grants to local education agencies to "assist them in providing direct services and in making systemic change to improve results for children with disabilities" (Ahearn, 1999). *The section specifies that sub-grants may be allocated to charter schools.*

2. Section 612 (a):(21): Establishes directions for state eligibility for financial assistance, and requires the creation of a state advisory panel in order to "provide policy guidance with respect to special education and related services for children with disabilities in the state" (Ahearn, 1999). The section specifies that membership of the panel shall include *representatives from charter schools*.

3. Section 613(a):(5): Provides conditions under which charter schools are eligible for financial assistance (Vanourek et al., 1997). The Local Educational Authority (LEA) *must serve children with disabilities* in the "same manner as it serves children with disabilities in its other schools" (Ahearn, 1999). And *provide funds* to those schools in "the same manner as it provides those funds to its other schools "(Ahearn, 1999).

These IDEA Amendments, require that: (a) when charter schools are public schools of the LEA, the LEA must serve children with disabilities in those schools in the same manner that it serves children with disabilities in its other schools and provide Part B funds to those school in the same manner that it does to the other schools and (b) a state education agency may not require a charter school that is an independent LEA to jointly establish its eligibility with another LEA (e.g., local traditional school district), unless it is explicitly permitted to do so under the state's charter school statue.

State laws regarding charter schools vary immensely. However, most state charter school regulations contain few specific references to students with disabilities (Ahearn, 1999). The only reference that most states make to special education in charter schools is in an information packet that guides potential school developers and entrepreneurs (Ahearn, 1999).

Unfortunately, at both the state and federal levels, the rules by which charter schools must operate in order to access funding are often fundamentally inappropriate given the nature and mission of charter schools (Vanourek et al., 1997; Manno et al., 1998a; Ahearn, 1999). Typically, the state statutes that establish charter schools are in conflict with the preexisting legal requirements (Ahearn, 1999). Charter schools, many of which are established to serve special students in non-standard ways, do not fit easily within the relatively bureaucratic structure of IDEA and Section 504 (Vanourek et al., 1997; Manno et al., 1998a).

While 95% of charter schools report offering special education services (U.S. Department of Education, 2000), as a whole charter schools still enroll 3% fewer disabled students than do public schools (8% versus 11%, respectively) (U.S. Department of Education, 2000). However, in a contrary interpretation, Vanourek et al. (1997) suggest that charter schools may actually enroll a greater proportion of disabled students (12.6%). The reason for this discrepancy is said to be due to the chronic underreporting of disabled students by charter schools (Vanourek et al., 1997).

In order to understand this last point, it is necessary to have a background regarding the allocation of special education funds to charter schools. First, under IDEA, the Department of Education allocates funds annually to states on the basis of the reported number of students receiving special education and related services for the previous fiscal year. In turn, states use their own formulas to distribute these funds (*Charter schools: Issues affecting access to federal funds.* (September 16, 1997). Hearings before the Subcommittee on Early Childhood, Youth, and Families, Committee on Education and the Workforce, U.S. House of Representatives. Testimony of Cornelia M. Blanchette (GAO/T-HEHS-97-216)). Specifically, IDEA funds and services are allocated to charter schools on the basis of whether the school is treated as an *independent* LEA or is viewed as a *dependent* of an LEA . Charter schools that are independent LEAs may apply directly to the state for IDEA funds, and states are required to include charter schools that are eligible independent LEAs in their block grant distribution of federal funds (Ahearn, 1999). In turn, independent charter schools must meet all federal and state eligibility requirements as any other local district (Ahearn, 1999). These funds are significantly greater, but have more strings attached, than are the funds for charter schools engaged in providing special education services which are dependents of an LEA. Dependent charters receive a proportional, per capita share of the federal funds received to serve children with disabilities *based only on the federal flow-through funds and not on locally generated tax bases.* Because of relatively burdensome eligibility qualification requirements that are time consuming to complete, some charter schools that could receive funds as independent LEAs do not apply for and thus do not receive these funds and remain as dependents of an LEA.

Another reason for underreporting and underaccess to federal funds is that many charter school administrators are wholly unfamiliar with the special education funding process. Many do not even realize that they are eligible for IDEA funds (*Charter schools: Issues affecting access to federal funds.* (September 16, 1997). Hearings before the Subcommittee on Early Childhood, Youth, and Families, Committee on Education and the Workforce, U.S. House of Representatives. Testimony of Cornelia M. Blanchette (GAO/T-HEHS-97-216). When they do realize their eligibility, many charter schools are incapable of receiving IDEA funds because they do not know the number of newly enrolled students who had an IEP in the prior school (U. S. Department of Education, 1998). Additionally, the time invested in applying for, complying with, and monitoring the reporting requirements of IDEA funds is often a daunting task for a charter school's small and typically inexperienced administrative staff. Finally, even when a charter school receives IDEA funds, they may not be able to be certain that they have received the appropriate level of funding because of charter school personnel's lack of familiarity with state funding formulas and granting procedures.

There are several additional barriers to a charter school's access to federal IDEA funds (U.S. Department of Education, 1998). First, many charter schools cite a philosophical difference with the use of a special education/disability label (Fiore, Warren, & Cashman, 1998; U.S. Department of Education, 1998; *Charter schools: Issues affecting access to federal funds* (September 16, 1997)). Hearings before the Subcommittee on Early Childhood, Youth, and Families, Committee on Education and the Workforce, U.S. House of Representatives. Testimony of Cornelia M. Blanchette (GAO/T-HEHS-97-216). Often, charter schools are created specifically in order to serve an educationally at-risk population. Since most charter schools attempt the creation of unique learning plans for all students, they reject the idea of "tracks" or "IEPs" for students with special needs (Vanourek et al., 1997). To further clarify, the administrators of charter schools often feel that they deliver individualized instruction to *all* students and are reluctant to report students as recipients of special educational services. Finally, many parents of special education services select charter schools specifically to avoid what they perceive as special education labeling and stigmatizing tracking.

Because charter schools often either specifically target a special population or are seen as refuges for them, charter schools may very well end up attracting a greater proportion of special needs students into their ranks (Vanourek et al., 1997). As Mcaughlin and Henderson (1998) note, "for many parents, the charter schools were becoming 'schools of last resort'" (p. 105). Because many charter schools specialize in the education of special populations, they may actually generate a greater obligation to serve children with disabilities, especially where they operate as an independent LEA (U. S. Department of Education, 1998; Ahearn, 1999).

Finally, although data reflecting rigor are currently unavailable, it is possible to discern at least a *perceived positive impact* of charter school education upon children in special education, based on parent satisfaction surveys. Manno et al. (1999) report that among parents of special needs children in charter schools, two out of three stated that they believed that the charter school's curricula and teaching were superior to that at the school their child would otherwise attend. Furthermore, while only 16.5% of parents rated their special education child's academic performance at their previous school as above average or excellent, more than double that amount (37.8%) felt that their special education child was performing above average or excellently within the charter school (Vanourek et al., 1997). The reasons for this perception of higher-quality outcomes from charter schools, compared with their traditional counterparts, is difficult to fathom if one begins with a presumption of the superiority of the public education service model. However, for parents who have no such standard against which to measure their children's success, there is a fairly clear statement of preference evident. The reason for this discrepancy would be a useful beginning point for a school psychologist researcher wanting to understand the intangibles that garner strong support for the charter movement from among the parent group.

SUMMARY

This chapter has outlined the motives for the development of charter schools, the rationales expressed by their protagonists and antagonists, and the characteristics of size, educational leadership, staffing patterns, curriculum variability, facilities, scheduling, approaches to technology and fiscal management, and parental involvement.

To date, there has been almost no significant interaction between the field of school psychology and the charter school movement, except in isolated pockets. Best practices for school psychologists in charter schools still remain a vision, as yet largely unarticulated into practice. Where school psychologists are already functioning as part of a charter school's team they typically are contracted to meet, minimally, the requirements of federal regulations protecting the rights of children with disabilities.

With anticipated continuing rapid growth of charter movement it is timely for school psychologists to articulate a more appropriate role for their professional services. In the service of children in contemporary charter establishments the role possibilities are wide open. The greatest *current need* is not special education consultation or mental health services. Rather it is in the design and implementation of accountability measuring systems, for these are a prerequisite for the schools' continuation. Thus, the opening gambit for school psychologists attempting entry into this exciting field may be through their skills in the objective appraisal of system data: as a program evaluation specialist.

There are few limitations on the breadth of role that a school psychologist might fill, a signal strength of the charter movement. However, there are demonstrable limitations to the development of *professional* school psychological services in terms of tenure, compensation levels, and similar proprietary contractual terms when compared with employment in comparable public school settings.

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II.

Improving Student Performance

33 Best Practices in Designing, Implementing, and Evaluating Quality Interventions

Kristi R. F. Upah
W. David Tilly III
Heartland Area Education Agency 11

OVERVIEW

In recent years, the trend in school psychology service delivery has shifted toward a problem solving focus; that is, an approach to developing interventions and ensuring student outcomes rather than determining failure or deviance (Deno, 1995; Reschly & Ysseldyke, 1995). This direction is reflected in major National Association of School Psychologists (NASP) publications, such as the previous edition of *Best Practices* (Thomas & Grimes, 1995) and *Blueprint II* (Ysseldyke et al, 1997) as well as other major professional publications (e.g., Rathvon, 1999; Reschly, Tilly, & Grimes, 2000; Shinn, Stoner, & Walker, in press). With this shift in practice comes the challenge and responsibility for school psychologists to ensure they are designing, implementing, and evaluating *quality* interventions. This chapter will assist practitioners by presenting critical quality indicators of interventions. Space limitations preclude a comprehensive treatment of each intervention component. Many of the quality indicators could and do have complete chapters or books written on them elsewhere. Hence, this chapter will provide a brief discussion of each component, along with references to more complete sources of each indicator. In addition, innovation configurations will be presented for school psychology practitioners to monitor their implementation of each component that will allow them to assess their own progress in designing, implementing, and evaluating quality interventions.

BASIC CONSIDERATIONS

Effective interventions are an essential feature of alternative service delivery systems and educational reform in an effort to meet the needs of all students (Graden, Zins, & Curtis, 1988; Stoner, Shinn, & Walker, 1991). In the previous edition, Tilly and Flugum (1995) defined "intervention" as *a planned modification of the environment made for the purpose of altering behavior in a pre-specified way.* Emphasis was placed on three components of this definition: (a) *planful*, the procedures to be applied are specified clearly and completely; (b) *environmentally focused*, the actions taken modify the environment and not the individual; and (c) *goal directed*, the behavior is altered in a pre-specified way. For the purposes of this chapter, let us expand upon the previous definition by viewing an intervention as *a set of procedures and strategies designed to improve student performance with the intent of reducing the student's problem.* Note that neither definition refers to a location for implementation or a specific person who will be implementing the intervention. Both definitions suggest that interventions can, and should, be implemented in any setting where they are needed (e.g., general education or special education setting, home or school) and implemented by whomever the appropriate person(s) may be (e.g., general education teacher, special education teacher, school psychologist, parent, support staff).

Quality indices of interventions have been described in the behavioral literature for over 25 years (i.e., Baer, Wolf, & Risley, 1968; Bijou, 1970). Since then many others (e.g., Ikeda, Tilly, Stumme, Volmer, & Allison, 1996; Macmann et al., 1996; Reynolds, Gutkin, Elliot & Witt, 1984; Schendel & Ulman, 1989) have identified components of interventions or models of problem solving that reflect quality indices. Although there are various models in practice, they all address (to varying levels of specificity) the major problem-solving stages seen in Bergan and Kratochwill's (1990) behavioral consultation model: problem identification, problem analysis, plan implementation, and problem evaluation. Rathvon (1999) used these same four stages in her intervention assistance process.

In the last edition of *Best Practices*, Tilly and Flugum (1995) proposed a finer-grained nine-component model as a best practice standard for the development and documentation of interventions. In addition to the six quality indicators presented by Flugum and Reschly (1994)—(a) a behavioral definition of the target behavior; (b) a direct measure of the student's behavior in the natural setting prior to intervention implementation (baseline data); (c) a step-by-step, or systematic, intervention plan; (d) implementation of the intervention as planned (treatment integrity); (e) graphing of intervention results; and (f) direct comparison of the student's post-intervention performance to baseline data—four other problem-solving components were identified: (g) systematic problem validation, (h) functional analysis of the problem, (i) goal setting, and (j) systematic formative evaluation of program effects (this step was combined with Flugum and Reschly's "direct comparison of post-intervention performance to baseline" to become "formative and summative evaluation"). Upah (1998) examined the validity of the best practices in intervention design and implementation presented by Tilly and Flugum by using objective, permanent product indices of intervention quality. This study found when practitioners' interventions contained these nine components with a high level of quality, it was more likely the intervention(s) led to positive student outcomes.

Upah's (1998) research, however, found that some of the components could be broken down further owing to the complexity of the indicator. This further separation, while creating additional components, allows for further clarity and isolation of specific indicators that may have been overlooked in past research and practice. As a result, a 12-component quality indicator model is presented as a best practice standard for designing, implementing, and evaluating quality interventions. These quality indices include:

1. Behavioral definition
2. Baseline data
3. Problem validation
4. Problem analysis steps
5. Goal setting
6. Intervention plan development
7. Measurement strategy
8. Decision-making plan
9. Progress monitoring
10. Formative evaluation
11. Treatment integrity
12. Summative evaluation

The 12 quality indicators will be presented within the four stages of behavioral consultation (Bergan & Kratochwill, 1990) since many problem-solving models follow these stages: problem identification, problem analysis, plan implementation, and problem evaluation. Table 1 illustrates how the four stages of problem solving are related to each of the 12 quality indicators. A flowchart depicting the 12 intervention components and their relationship is contained in Figure 1.

BEST PRACTICES

Problem Identification

The first step in the problem-solving process is to identify and define the problem. A *problem* is defined as *the difference between what is expected and the actual student behavior or performance*. This definition helps to further clarify the intent of problem solving; that is, to create an effective solution to bridge, and ultimately close, the gap between the student's performance and the expected behavior. The activities at the problem identification stage are intended to describe, validate, and determine the magnitude of the problem. The school psychologist and other members of the problem-solving team must answer three major questions during problem identification:

Table 1. Quality indicators addressed within the problem-solving process

Problem solving stages	*Intervention Components*
Problem identification	• Behavioral definition • Baseline data • Problem validation
Problem analysis	• Problem analysis steps
Plan implementation	• Goal setting • Intervention plan development • Measurement strategy • Decision-making plan
Program evaluation	• Progress monitoring • Formative evaluation • Treatment integrity • Summative evaluation

1. What is the behavior of concern and/or the desired behavior? (behavioral definition)

2. What is the student's current level of performance in the target behavior? (baseline data)

3. How does the student's behavior compare to peers' behavior or environmental expectations? (problem validation)

BEHAVIORAL DEFINITION

Behaviors that are the subject of interventions must be described in specific, observable, and measurable terms (Alberto & Troutman, 1986; Howell & Nolet, 2000). This process is called operationally defining a behavior. The importance of a behavioral definition has been emphasized for nearly three decades (e.g., Baer et al., 1968; Bijou, 1970). Twenty years later, Baer, Wolf, and Risley (1987) continued to support defining the behavior in observable, quantifiable terms. Other authors (e.g., Deno, 1995; Grimes, 1981; Reynolds et al., 1984; Steege & Wacker, 1995) have recognized how essential an accurate behavioral definition is to the success of the intervention. A behavioral definition of the problem ensures that the school psychologist and other involved persons share a common understanding of when the behavior is or is not occurring. As a result, operational definitions of student behavior allow for a reliable measurement of outcomes (Kazdin, 1982; Steege & Wacker, 1995).

An operational definition must meet three criteria: (a) *objective*, the definition should refer to observable characteristics of behavior describing the actions that can be seen or heard; (b) *clear*, the definition should be so unambiguous that it could pass the "stranger test" (it could be read, repeated, and paraphrased by observers); and (c) *complete*, the definition should delineate both examples and non-examples of the behavior so that differences between occurrences and non-occurrences of the behavior can be discerned (Hawkins & Dobes, 1977; Howell & Nolet, 2000; Kazdin, 1982; Tilly, Reschly, & Grimes, 2000). To write behavioral definitions meeting these criteria, it may be helpful to use a standard format. One format that is particularly useful is:

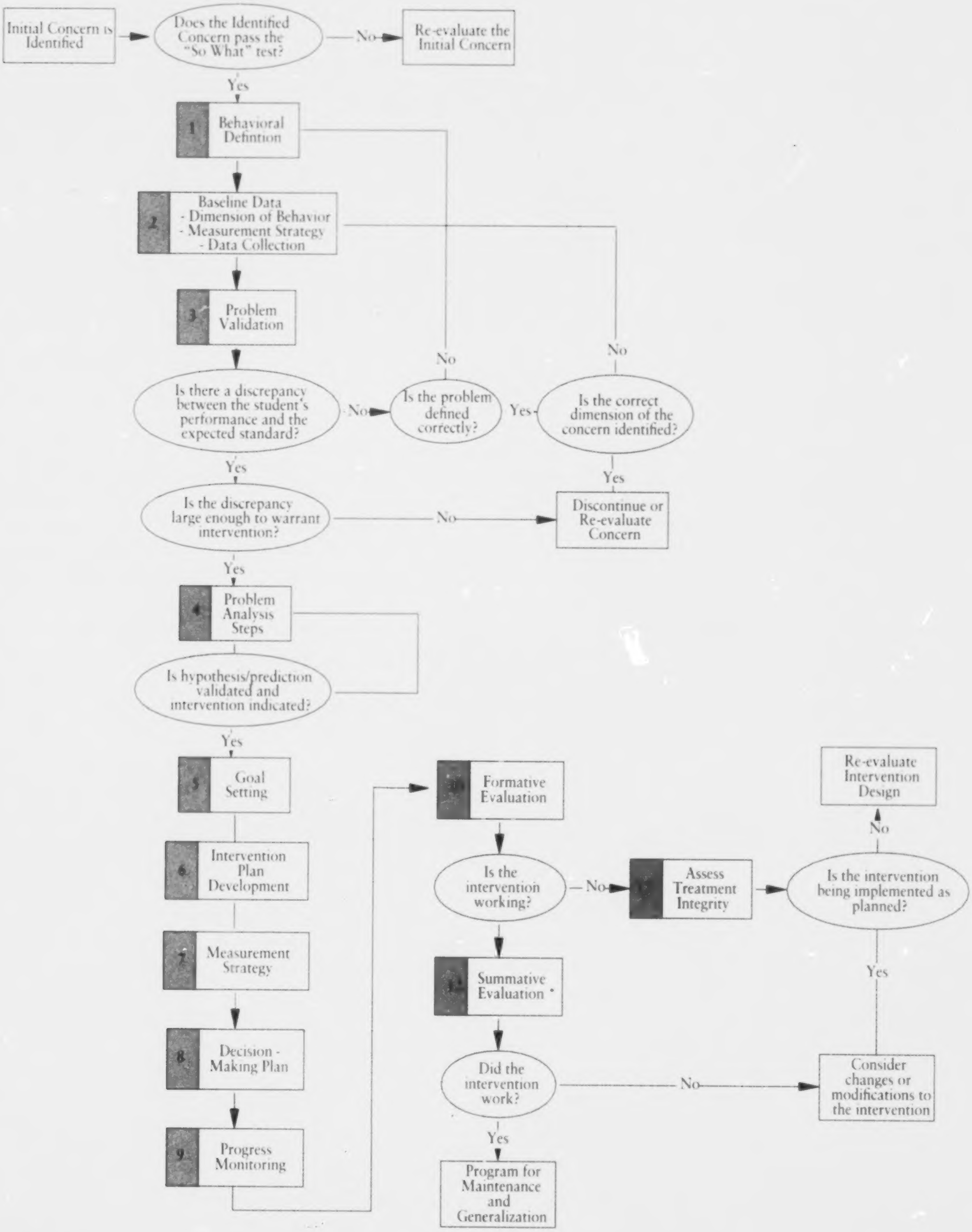
> *Target behavior* means that *target student* (*action verbs*). Examples of *target behavior* include (1)..., (2)..., (3).... Non-examples of *target behavior* include (1)..., (2)..., (3)....

This format requires that attention is directed at what a student actually does when performing the behavior, providing a vehicle for efficient writing of definitions.

BASELINE DATA

Measurement of the target behavior in the natural setting prior to plan implementation is essential to interventions (Casey, Skiba, & Algozzine, 1988). The establishment of the student's current level of functioning provides a baseline that is useful in evaluating the existence of the problem behavior, the effectiveness of the intervention, and the degree of student progress (Reynolds et al., 1984; Schendel & Ulman, 1989; Sulzer-Azaroff & Mayer, 1991). The baseline

Figure 1. Intervention process


Initial Concern is Identified
Does the Identified Concern pass the "So What" test?
No
Re-evaluate the Initial Concern
Yes
1
Behavioral Defintion
2
Baseline Data
- Dimension of Behavior
- Measurement Strategy
- Data Collection
3
Problem Validation
No
No
Is there a discrepancy between the student's performance and the expected standard?
No
Is the problem defined correctly?
Yes
Is the correct dimension of the concern identified?
Yes
Yes
Is the discrepancy large enough to warrant intervention?
No
Discontinue or Re-evaluate Concern
Yes
4
Problem Analysis Steps
Is hypothesis/prediction validated and intervention indicated?
Yes
5
Goal Setting
6
Intervention Plan Development
7
Measurement Strategy
8
Decision - Making Plan
9
Progress Monitoring
10
Formative Evaluation
Is the intervention working?
No
Assess Treatment Integrity
Is the intervention being implemented as planned?
No
Re-evaluate Intervention Design
Yes
Summative Evaluation
Did the intervention work?
No
Consider changes or modifications to the intervention
Yes
Program for Maintenance and Generalization

data component involves three steps: (a) establishing the relevant dimension(s) of the problem behavior, (b) developing a method to systematically measure the behavior, and (c) collecting data on the behavior prior to implementing an intervention.

When identifying the appropriate dimensions of the target behavior, FLITAD is a useful acronym to remember. The letters in FLITAD reflect the first letters of the possible dimensions of the behavior that may be problematic (Sulzer-Azaroff & Mayer, 1991): *F*requency, the number of times a behavior occurs; *L*atency, the elapsed time from the presentation of a stimulus and the response or behavior; *I*ntensity, the strength or force with which a behavior is expressed; *T*opography, the configuration, form, or shape of a response or behavior; *A*ccuracy, the extent to which the behavior meets standards or is correct; and *D*uration, the length of time that passes from onset to offset of a behavior.

Behavioral measurement strategies often are selected based on the dimension of behavior that is problematic. Behaviors that manifest as frequencies are best tallied. Behaviors of latency and duration are best measured by using time in seconds or minutes. Intensity can be scaled on a rubric, but is best measured by using objective scales such as decibel meters or pounds of pressure per square inch. Accuracy is measured through scoring of permanent products or probes.

A measurement strategy is used to develop the method of systematically measuring behavior. The following questions should be answered when developing a measurement strategy: (a) *How will the data be collected?* (b) *What materials will be used to collect data?* (c) *In which setting(s) will data be collected?* (d) *Who will be responsible for collecting the data?* (e) *When (and how often) will the data be collected?* In designing the measurement strategy, there are three important points to consider. First, the behavior must be measured directly in the setting where it is perceived to be problematic. Second, the measurement strategy used to collect information should be accurate, objective, and related directly to the relevant dimension of the behavior. Third, this same strategy will be used throughout the intervention to monitor and evaluate its effectiveness at improving student performance. As a result, the feasibility of collecting data frequently and repeatedly over time is an issue.

Baseline data collection should consist of repeated measures of the target behavior over several sessions, days, or even weeks until a stable range of behavior has been identified (e.g., no new highs or lows for three data points in a row (Sulzer-Azaroff & Mayer, 1991)). Collection of baseline data serves several purposes related to other intervention components. Documenting pre-treatment levels of behavior provides needed information for validating the problem (problem validation) and later evaluating the program (formative evaluation and summative evaluation). Current performance provides data for predicting future performance in the absence of intervention, thus setting standards for goals and evaluation (goal setting, formative evaluation, and summative evaluation). An opportunity to observe relationships between the problem behavior and other environmental variables provides critical information useful during functional analysis and intervention design (problem analysis and intervention plan development).

PROBLEM VALIDATION

As was stated earlier, a practical method in defining a problem is to conceptualize problems as the difference between what is expected in an environment and what actually occurs (Deno, 1995; Tilly & Flugum, 1995). Problem validation is the process of determining the magnitude of the problem by summarizing the discrepancy between a student's current level of performance and the environmental expectations (Howell & Nolet, 2000). Validating the existence of this discrepancy ensures that a successful intervention will result in a socially meaningful outcome.

In practice, a discrepancy is determined by comparing a student's current level of performance, documented using baseline data, to a standard. The standard must be appropriate to the behavior and represent an acceptable performance level. A useful standard for both academic and non-academic behaviors is peer performance obtained by measuring typical peers' performance on the behavior of concern to find a range of typical performance. If direct peer comparison data are not available, then other local standards might include local building or district norms, teacher/classroom expectations, criteria for the next environment, or school policy standards. Other standards not directly derived from the student's local district might include instructional placement standards, state or national norms, developmental standards, or medical standards. Although these standards provide a less precise comparison standard, they are used primarily when local standards are inappropriate or unavailable.

The school psychologist should ask the problem-solving team two questions when validating a problem (Schendel & Ulman, 1989; Tilly & Flugum, 1995). First, is there a discrepancy between the target student's performance and the performance standard? Second, if a discrepancy exists, then is it large enough to warrant intervention? If the answer to either of these questions is *no*, then the existence of or severity of the problem should be questioned and possibly re-examined. If the answer to both of these questions is *yes*, then the problem is validated and further assessment for the purpose of developing and evaluating interventions is needed.

Problem Analysis

As was mentioned above, the next step is to conduct further assessment for the purpose of designing, implementing, and evaluating interventions. This further assessment determines what is known about the problem and what important and relevant information still needs to be obtained in order to evaluate the underlying causes of *why* the problem is occurring. Problem analysis is a critical step in the problem solving process; that is, problem analysis provides the critical link between the assessment information and intervention procedures. This step is perhaps the most complex and most critical to the selection of appropriate interventions. Indeed, when an accurate problem analysis has been completed, the design of potentially effective interventions becomes less difficult. The major question to be answer by the school psychologist and other problem-solving team members during problem analysis is, *Why is the problem occurring?*

PROBLEM ANALYSIS STEPS

Problem analysis information should be the result of a very specific, question-driven assessment process. There are five steps to problem analysis: (a) identify relevant known information, (b) identify relevant unknown information, (c) generate a hypothesis or prediction, (d) validate the hypothesis or prediction, and (e) link the assessment information to intervention design.

The first two steps involve collecting data in the four domains of instruction, curriculum, environment, and the learner (ICEL). First, all relevant known information pertaining to the multiple domains (i.e., ICEL) of the problem are gathered through record reviews and interviews. Once all relevant known information is considered, information that is relevant to the problem but is unknown needs to be gathered through observations and tests. As information is collected that answers the unknown relevant information this becomes known information from the standpoint of informing future decisions.

After the initial assessments are completed, the third step of problem analysis is hypothesis or prediction statement generation. This process involves making informed statements about why the problem occurs. The typical format for the hypothesis is "*(the problem) occurs because* ______________________." The following format for a hypothesis statement may be more helpful when completing a functional behavioral assessment ~~of a~~ challenging behavior: *The problem is occurring because when (the trigger occurs), the student (behavior) in order to/because (hypothesized function or reason)*. The hypothesis is based on the relevant and alterable information initially generated in the first two steps and leads to a prediction statement. A prediction statement creates the direct and logical link between assessment information and intervention action. The prediction makes a proposition, based on the hypothesis, of what would occur if some other set of factors were in place. The typical format is "*if (a specific action) occurred, then (the problem) would be either increased or decreased*." Predictions are directly related to the original hypothesis and should be composed of specific actions that are reasonable and do-able in the known context of where the problem exists. This process of hypothesis generation and prediction is data driven and focused on refining the problem. As such, this process is very different from simply brainstorming any possible reason for the concern(s). As a result, the hypothesis and prediction statement offer logical explanations for the problem behavior and guide the development of the intervention plan.

The fourth step of problem analysis involves validating the hypothesis and prediction statement. Validation can occur either through implementation of the ultimate intervention or through systematic manipulation of the environment (as stated in the prediction) and observing the effect on student performance. In either case, data are collected through observations or tests to verify or confirm the hypothesis and prediction statement.

Once hypotheses and predictions are validated, the focus of problem solving turns to intervention design and implementation. This final step is the crux of the problem analysis phase of problem solving and is where the accurate matching of known features of identified problems is directly applied in the consideration of the most meaningful and potentially effective interventions. This process is what makes the difference between simply knowing where to find possible interventions and how to accurately apply them in situations where they have the highest likelihood of being successful based on the individual analysis of the student's concern(s). The school psychologist must always keep in mind the skills of the intervention implementers, the reasonability of the intervention selected, and the monitoring requirements of the intervention.

Two specific methods of problem analysis for which school psychology practitioners may wish to learn more about include:

1. Functional Behavioral Assessment (FBA), the process of coming to an understanding of why a student engages in challenging behavior and how student behavior related to the environment through the identification of the antecedents, consequences, and the function served from the student's behavior (Knoster & McCurdy, this volume; Tilly et al., 1998).
2. Curriculum-Based Evaluation (CBE), a systematic decision-making framework for examining the assumed causes of problem behaviors linking assessment to instruction (Howell, Kurns, & Antil, this volume; Howell & Nolet, 2000).

Plan Implementation

At this phase of problem solving, the focus turns to developing and carrying out an intervention plan to resolve the problem. The intervention components addressed at this stage must be logically and empirically related to the identified problem and to the reasons that the problem situation exists. In other words, the actions taken during the plan implementation stage must be based on the specific information derived from the problem identification and problem analysis stages. The school psychologist and other members of the problem-solving team must answer four major questions during the plan implementation stage.

1. What is our desired outcome of the intervention? (goal setting)
2. What are we going to do to achieve that outcome? (intervention plan development)
3. How are we going to know if the plan is working? (measurement strategy)
4. What do we do if the plan works or does not work? (decision-making plan)

GOAL SETTING

The goal is the intended outcome of the intervention; that is, the direction or extent to which the target behavior is to be changed. In the absence of a clearly articulated goal, the effectiveness of the intervention can become obscured. In other words, if we do not know where we are going, then we will not know when we get there. Clearly written, justifiable goals and procedures for evaluating goal attainment are key factors to successful programs (Cobb, 1995; Fuchs, 1995). There are three critical purposes for developing goals: (a) the teaching and intervention are directed, (b) the plan is focused on student outcomes, and (c) the methods for assessment and evaluation are structured (Fuchs, 1995).

Goal statements are based on the problem behavior(s) and should state clearly, in a measurable way, what the student's performance will look like if the intervention is successful. Every goal must be written in observable, measurable terms and include four components: time frame, condition, behavior, and criteria. The *time frame* is when the expected progress is to be accomplished. The *condition* is the specific circumstances under which the behavior is to occur, typically taken from the information obtained during the problem identification and problem analysis stages. The *behavior* is the specific behavioral description of the task to be performed; that is, it may be the target behavior as defined during the problem identification stage or an incompatible behavior that is to replace the behavior of concern. The *criteria* is the standard of how well (e.g., how much, how often, to what degree or level) the behavior is to be performed. The criterion is related to both the student's current level of performance (baseline) and the expected level of performance (standard). However, for some goals the criterion may not be the actual standard used during problem validation in the problem identification stage. Several factors should be considered in setting the criterion: (a) the student's current skill level, (b) the skill/behavior targeted for intervention, (c) realistic growth rates, (d) reporting and follow-up schedules, and (e) the time period covered by your goal.

In most circumstances, a goal statement can both be stated narratively and be represented graphically on a performance chart. For the narrative statement, it may be helpful to use a standard format. A format often used for stating goals is:

> *In (number) weeks, when (condition) occurs, (learner) will (behavior) (to a) (criterion).*

For the graphic display of the goal, the following procedures should be used: (a) choose the central point for the baseline data, (b) draw a vertical line after the baseline data, (c) set a second endpoint at the highest performance level on the date by which you want the student to achieve the goal, and (d) draw a straight line between the two endpoints.

INTERVENTION PLAN DEVELOPMENT

The intervention plan answers questions relevant to solving the identified problem, including who will do what, when they will do it, where the plan will be implemented, how the steps will be completed, and with whom the plan will be implemented (Macmann et al., 1996; Tilly & Flugum, 1995; Howell & Nolet, 2000). This plan ensures the school psychologist and all other parties involved with the intervention share the same understanding of the procedures that will be used, as well as serves as a guide for implementors of interventions and a record of the intervention. Just as an operational definition completely describes a behavior of concern, an intervention plan clearly describes the procedures to be used during an intervention. Applying the "stranger test" to the plan assists in meeting this purpose: The plan should be clear enough that another school psychologist or educator could replicate the intervention and produce the same results (Baer et al., 1968). The clarity of the plan also will facilitate the intervention being implemented as intended, increasing the integrity of the intervention (Fuchs & Fuchs, 1989; see treatment integrity section). Generic descriptions of an intervention (e.g., "social skills training," "differential reinforcement of other behavior (DRO)") are not adequate for intervention plans (Telzrow, 1995).

MEASUREMENT STRATEGY

The major components of the measurement strategy were already developed to collect the baseline data. Modifications may be made to this strategy in relation to where the data will be collected, who will collect the data, and when the data will be collected. However, the overall method and materials used to collect the data should remain the same, allowing accurate comparisons to be made between the student's baseline level of performance and the progress monitoring data. To ensure the integrity of the measurement strategy, what is written in the plan should answer the following questions:

1. How will the data be collected?

2. What materials will be used to collect data?

3. In which setting(s) will data be collected?

4. Who will be responsible for collecting the data?

5. When (and how often) will the data be collected?

DECISION-MAKING PLAN

The final component of plan implementation is to determine how decisions will be made through describing the strategies that will be used for data collection, summarization, and evaluation (Ross, 1995). Tilly and Flugum (1995) identified four specific issues to be addressed: (a) frequency of data collection, (b) what strategies will be used to summarize data for evaluation, (c) how many data points or how much time should occur before data will be analyzed, and (d) a decision rule (guidelines that tell what to do when certain patterns of data occur (Howell & Nolet, 2000)). A number of principles underlie data-based decision making, many of which are derived from single-case research design. Extensive discussion of these issues can be found in Kazdin (1982).

Problem Evaluation

The problem evaluation stage of the problem-solving process focuses on determining how well the intervention plan is working in addition to if and how the plan needs to be changed. During problem evaluation, the school psychologist and other problem-solving team members must answer three major questions:

1. Is the intervention working? (progress monitoring and formative evaluation)
2. Is the intervention being implemented as planned? (treatment integrity)
3. Did the intervention work? (summative evaluation)

PROGRESS MONITORING

Progress monitoring is a primary ingredient in a problem-solving approach (Marston & Tindal, 1995; Shinn, 1989). Throughout intervention implementation, student performance should be assessed so continuous evaluation can occur and interventions may be modified as needed. Carter and Sugai (1989) suggested that the most reliable way to evaluate an intervention is through frequent and repeated monitoring (e.g., one to three times per week) of the target behavior. Data are collected across time on the behavior that was identified during problem identification. These data can be used to create a graphic display for the purpose of illustrating trends in student performance by repeatedly plotting the problematic dimension (i.e., FLITAD) of student behaviors over time. Graphing the student's performance enables the school psychologist and other intervenors to detect slight changes in behavior that otherwise might not be recognized (Casey et al., 1988).

There are many ways to gather progress monitoring data. One well-known method for monitoring basic academic skills progress in reading, writing, or math is the use of Curriculum-Based Measurement (CBM; Shinn, 1989, this volume). Other possible methods include but are not limited to checklists, frequency count, observation procedures, percentages, permanent products, portfolios, rating scales, rubrics, and time (duration or latency). Recall, however, that progress monitoring must use the same procedures that were used to collect the baseline data during the problem identification stage. Consistency in measurement across time allows the school psychologist and other evaluators to be sure that changes in the data result from changes in student performance rather than changes in measurement procedures.

It is important to gather data because it is possible to be fooled about program effects. Without proper data, it is possible to believe that an intervention is assisting the student to achieve some goal when in fact it is not. It is also possible that the student is actually progressing toward some objective, but without the help of data it is believed otherwise (Lovitt, 1991). Simply collecting the data for the sake of collecting data, however, is not enough. It needs to be used in the decision-making process (Tawney & Gast, 1984). Unfortunately, people collect data on the existence of a problem and then monitor progress toward goals, but they may not use the data to make timely changes in unsuccessful interventions (Deno, 1995).

Visual representation of performance using graphs is one means for summarizing and evaluating the data. Graphs are useful for at least three purposes. First, they provide a means of visually summarizing information about student performance, for example current levels of performance, projected performance (a performance goal), and actual performance as it changes over the course of intervention. Second, graphing of results during monitoring may have an important impact on inferences made about the intervention effectiveness and student progress (Skiba, Deno, Marston, & Casey, 1989). For example, "When parents, teachers, and other agents can see visual evidence (i.e., a graph) that a procedure is bringing about the desired change, they are likely to find the evidence reinforcing. Such reinforcement helps to maintain the participation of those people in the treatment program, which is critical if objectives are to be achieved." (Sulzer-Azaroff & Mayer, 1991, p.128). Third, graphing of student performance provides a measure of professional accountability demonstrating how behavior change is functionally related to the intervention being implemented. For clarity of communication, a standard format should be used for graphs (e.g., Parsonson & Baer, 1978; Sulzer-Azaroff & Mayer, 1991).

1. The title should provide a concise description of the nature and purpose of the intervention.

2. Scale captions should establish the identity and meaning of the behavior and measurement procedure.

3. The X-axis and Y-axis scales and their scale units should represent the appropriate type and range of what is measured.

4. Different intervention phases should be labeled on the graph.

5. All relevant data should be shown in an appropriate form

6. A goal line should be present.

When a standard format is followed, additional advantages are to be gained through the use of graphs: (a) They provide a visual that yields quick conclusions and hypotheses; (b) they are quick and easy to make; (c) they can be presented in a wide range of formats with a variety of data types; (d) the messages are immediate, enduring, and accessible to students; (e) there is minimal transfer of data; and (f) the theoretical premises underlying graphs are minimal and well known (Parsonson & Baer, 1992).

FORMATIVE EVALUATION

Formative evaluation answers the question, *Is the plan working?* As a result, it occurs *throughout* the implementation of an intervention. The purpose of formative evaluation is to determine the likely success of an intervention during its implementation so that it can be modified or changed to increase the likelihood that intended results will be achieved. The method to be used for formative evaluation should be detailed in the decision-making plan outlined during the plan implementation stage.

An effective formative evaluation method is to visually analyze the performance data during the intervention implementation and to compare these data to the baseline data collected prior to the intervention. Kazdin (1982) describes four visual analysis criteria that may be applied:

1. Change in mean: Is the average rate of performance higher (or lower) during the intervention than during baseline?

2. Change in level: Is there a discontinuity of performance (in the desired direction) from the end of baseline to the start of the intervention?

3. Change in trend: Does the trend in performance increase (or decrease) over time?

4. Latency of change: Is there a change in performance (in the desired direction) after the first week of intervention?

Another frequently used method is to examine the progress monitoring data in relation to the goal line using the four-point rule. If four consecutive data points are at or above the goal line, then the school psychologist and other problem-solving team members need to consider whether or not to raise the goal or, in some cases, how to program for maintenance and generalization so that exit can be discussed. If four consecutive data points fall below the goal line, then the school psychologist and other problem-solving team members need to decide how to change the pace of instruction, the materials being presented, the numbers of opportunities to respond, or the reinforcement in place, so that performance improves. If the data are highly variable, then the school psychologist and other problem-solving team members may need to decide how to motivate the student to more consistently perform the desired behaviors so that the data can then be evaluated against the goal line to determine the intervention effect.

TREATMENT INTEGRITY

The intervention needs to be implemented as planned in order to determine if the intervention is effective. The degree to which the intervention is implemented as planned is often called "treatment integrity" (Gresham, 1989; Telzrow, 1995; Yeaton & Sechrest, 1981). Several authors (e.g., Elliott, Witt, & Kratochwill, 1991; Fuchs & Fuchs, 1989; Lentz, Allen, & Ehrhardt, 1996; Reynolds et al., 1984; Taylor & Miller, 1997) have recognized the importance of treatment integrity in the implementation of an intervention.

There are a number of different approaches that can be used to assess treatment integrity. A teacher or parent may be interviewed regarding the steps followed during intervention (Kaufman & Flicek, 1995). Direct observation of teacher or parent behavior could be conducted occasionally throughout the intervention implementation to assess whether the steps are being carried out as planned (Gresham et al., 1993). Or the written step-by-step intervention plan could be used as a checklist; that is, every time the intervention was implemented the teacher or parent would complete the checklist to determine the steps that were followed (Gresham, 1989). The important component in assessing treatment integrity is determining the extent to which intervention procedures were implemented as intended.

Without at least occasional treatment integrity checks, the school psychologist cannot be sure that the intervention is being applied as designed (DuPaul & Stoner, 1994). If the intervention is not implemented as designed, progress (or lack thereof) cannot be attributed to the specific plan. It is a matter of internal validity; that is, regardless of size of effect, the school psychologist cannot conclude that changes in the dependent variable(s) (i.e., student behavior) can be attributed to the influence of the independent variable (i.e., intervention) if it has not been determined that the intervention was implemented as intended. School psychology practitioners who fail to monitor the consistency and accuracy with which interventions are implemented cannot validly attribute a student's behavioral improvements (or failure to improve) to the behavioral interventions implemented (Kaufman & Flicek, 1995).

There are strategies to ensure treatment integrity (Gresham, 1989; Rathvon, 1999): (a) have a written intervention plan (see intervention plan section), (b) train the student and implementers of the intervention, (c) build an observation component into the intervention plan, and (d) avoid complex and ecologically intrusive interventions because treatment integrity is negatively associated with the complexity and time required to implement interventions (Gresham, 1989; Yeaton & Sechrest, 1981).

SUMMATIVE EVALUATION

Summative evaluation answers the question, *Did the plan work?* As a result, it occurs *after* an intervention has been completed. The purpose of summative evaluation is to determine whether the intervention was successful and produced positive student outcomes. The school psychologist and other problem-solving team members should rely on two sources of information in conducing the summative evaluation: (a) the decision-making plan, particularly the decision rule, that was developed during the plan implementation stage and (b) the difference between the student's baseline performance and the post-intervention performance. In addition, it is recommended that data continue to be collected periodically to determine whether the progress is maintained once the intervention is removed (Casey et al., 1988). If there were positive outcomes, then the school psychologist along with other problem-solving team members can decide that the problem was resolved and plan for maintenance and generalization. If the outcome of the intervention was not positive, then the school psychologist and other problem-solving team members will want to consider changes to the intervention through reanalyzing the problem.

Innovation Configurations: Monitoring Your Practice

Recently, Telzrow, McNamara, and Hollinger (2000) found similar results to those found by Flugum and Reschly (1994) and Upah (1998): The majority of students are not receiving *quality* interventions. Telzrow et al. stress the need for the school psychology profession to increase the implementation of these quality indicators to improve the effectiveness of our interventions. One means of improving our practice is through self-monitoring of our skills. The innovation configurations presented in Figures 2–5 can assist with this self-monitoring.

An innovation configuration (Hord, Rutherford, Huling-Austin, & Hall, 1987) is a staff development tool that delineates for practitioners the skills related to the innovation in concrete, observable, and measurable terms. It presents "best" practice in operational terms while describing the variations in practice that may occur as practitioners apply new skills. School psychology practitioners can compare their own school-based interventions to these standards to examine the extent to which their practice meets quality intervention standards. This comparison allows for identification of current level of implementation and ways that school psychologists can improve provision of quality interventions.

Figure 2. Problem identification stage innovation configurations

Behavioral definition

5	4	3	2	1
Definition is (a) *objective*—refers to observable and measurable characteristics of behavior; (b) *clear*—so unambiguous that it could be read, repeated, and paraphrased by observers; and (c) *complete*—delineates both examples and non-examples of the behavior.	Definition meets only two of the three criteria (i.e., objective, clear, complete).	Definition meets only one of the three criteria (i.e., objective, clear, complete).	Problem behavior is stated in general terms (e.g., reading comprehension, aggressive behavior, etc.).	Behavioral definition is not written.

Baseline data

5	4	3	2	1
Data collected on the behavior *prior* to implementing the intervention consisting of repeated measures of the target behavior over several (at least three) sessions, days, or even weeks until a stable range of behavior has been identified.	Data collected on the behavior prior to implementing the intervention; however, only two data points are reported.	Data collected on the behavior prior to implementing the intervention; however, only one data point is reported.	Data collected on the behavior prior to implementing the intervention; however, the dimension(s) addressed are not the most appropriate for the selected target behavior.	Baseline data not gathered prior to implementing the intervention.

Problem validation

5	4	3	2	1
The magnitude of the discrepancy is quantified, based on a comparison between student's performance and the local educational setting demands.	The magnitude of the discrepancy is quantified, based on a comparison between the student's performance and standards outside the local educational setting.	The magnitude of the discrepancy is quantified, but is based on an opinion.	The magnitude of the discrepancy is described qualitatively.	Problem is not validated; magnitude of the discrepancy is not described.

Figure 3. Problem analysis stage innovation configuration

Problem analysis

5	4	3	2	1
Examined relevant and alterable factors from curriculum, instruction, environment, and student domains using a variety of procedures (RIOT: review, interview, observe, test) to collect data from a variety of relevant sources and settings. Used this information to develop a specific intervention to change the behavior.	Examined relevant and alterable factors from two to three domains only using two to three procedures to gather information. Used this information to develop a specific intervention to change the behavior.	Examined relevant and alterable factors from only the student domains using a variety of procedures (RIOT) to collect data from a variety of relevant sources and settings. Used this information to develop a specific intervention to change the behavior.	Examined relevant and alterable factors from the domains only using a variety of procedures to gather information from a variety of sources. However, there is no indication this information was used to develop a specific intervention to change the behavior.	Problem analysis is not conducted.

Innovation configurations are constructed in a standard way. A number of critical components of an innovation (in this case, quality interventions) are each scaled on an ordinal scale. For each component, variations on the left-hand side of the double line (usually designated as number 5) are considered to be the *best practice* application of a specific intervention component. Variations to the left of the single line are considered to be acceptable variations in application of the specific intervention component. Variations to the right of the single line (usually designated as number 3, 2, or 1) are considered to be unacceptable applications of the particular intervention component in that they may render the intervention ineffective.

SUMMARY

The qualifications and conclusions remain the same as those presented in Tilly and Flugum (1995). While it may appear that school-based interventions occur in a linear, well-articulated sequence, they do not. Many of the intervention components may occur simultaneously and many of the procedures cycle back upon themselves. The major point of this chapter is not to prescribe a lock-step order in which interventions are to be designed, implemented, and evaluated. Instead it is to use a familiar framework (i.e., behavioral consultation/problem-solving process) to illustrate how school psychology practitioners can ensure their own practice improves the quality of intervention practices, thus improving student outcomes.

As a school psychology practitioner, the first author acknowledges that interventions are almost never as pristine as are the procedures presented in chapters such as this one. Despite many challenges to our practice, however, using a problem-solving model to provide intervention services remains the best research-based approach for improving individual student outcomes. Whether students receive interventions through special education services or general education services, the components are equally applicable. Designing, implementing, and evaluating quality interventions will secure a place in future educational systems for school psychologists and more importantly result in improved outcomes for our students.

Figure 4. Plan implementation stage innovation configurations

Goal setting

5	4	3	2	1
Goal stated narratively and represented graphically on performance chart specifying time frame, condition, behavior, and criterion, which is based on a comparison between the student's baseline data and the expectations.	Goal represented graphically on performance chart specifying time frame, behavior, criterion, and condition—not stated narratively.	Goal stated narratively specifying time frame, behavior, criterion, and condition—not represented graphically.	Goal stated narratively and/or represented graphically on performance chart but does not specify all four components (time frame, condition, behavior, criterion).	Goal is not measurable or is not set.

Intervention plan

5	4	3	2	1
Plan stated (a) procedures/strategies, (b) materials, (c) when, (d) where, and (e) persons responsible.	Plan stated procedures/strategies. But one of the following components is missing: materials, when, where, or persons responsible.	Plan stated procedures/strategies. But two of the following components is missing: materials, when, where or persons responsible.	Generic description of intervention strategy (e.g., behavior management) is stated. Materials, when, where, and persons responsible may be present.	Intervention plan not written. Or generic descriptions of intervention (e.g., behavior management) only.

Measurement strategy

5	4	3	2	1
A measurement strategy is developed answering *how? what? where? who?* and *when?*	A measurement strategy is developed but only answers four of the five questions: *how? what? where? who?* and *when?*	A measurement strategy is developed but only answers three of the five questions: *how? what? where? who?* and *when?*	A measurement strategy is developed but only answers two of the five questions: *how? what? where? who?* and *when?*	Measurement strategy is not developed. Or the measurement strategy only answers one of the five questions.

Figure 4. (Continued)

Decision-making plan

5	4	3	2	1
The decision-making plan indicates (a) how frequently data will be collected, (b) the strategies to be used to summarize the data for evaluation, (c) how many data points or how much time will occur before the data will be analyzed, and (d) what actions will be taken based on the intervention data.	The decision-making plan indicates three of the four components.	The decision-making plan indicates two of the four components	The decision-making plan indicates only one of the four components.	The decision-making plan is not documented.

Figure 5. Plan evaluation stage innovation configurations

Progress monitoring

5	4	3	2	1
Data are collected and charted/graphed two to three times per week. Appropriate graphing/charting conventions were used (e.g., descriptive title, meaningful scale captions, appropriate scale units, intervention phases labeled).	Data are collected and charted/graphed once a week. Appropriate graphing/charting conventions were used.	Data are collected and charted/graphed irregularly and infrequently (less than once a week, but more than pre and post). Appropriate graphing/charting conventions may or may not be used.	Data are collected but not charted or graphed. Or only pre-information and post-information was collected and/or charted/graphed.	Progress monitoring data not collected.

Formative evaluation

5	4	3	2	1
There is evidence the decision rule was followed and visual analysis was conducted. These data were used to modify or change the intervention as necessary.	There is evidence the decision rule was followed and visual analysis was conducted, but the data were not used to modify or change the intervention as necessary.	Modifications or changes were made to the intervention based on subjective data.	Modifications or changes were made to the intervention, but no indication as to what data were used to make these changes.	No formative evaluation was conducted.

(Continued on the following page.)

Figure 5. (Continued)

Treatment integrity

5	4	3	2	1
Degree of treatment integrity measured and monitored. Plan is implemented as designed, including decision-making rules. Intervention changed/ modified as necessary on the basis of objective data.	Degree of treatment integrity addressed. Plan was implemented as designed and modified as necessary on the basis of subjective opinions.	Degree of treatment integrity addressed. Plan was implemented with variations from the original design with no basis for change stated.	Treatment integrity addressed, but intervention was not implemented as planned.	Treatment integrity not considered.

Summative evaluation

5	4	3	2	1
Outcome decisions are based on the progress monitoring data.	Outcome decisions are based on minimal data (i.e., pre and post tests).	Outcome decisions are based on subjective data.	Outcome decision stated but no indication of what data were used to make the conclusion.	No summative evaluation took place.

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This book presents a problem-solving model within the framework of behavioral consultation. The four stages include problem identification, problem analysis, plan implementation, and program evaluation. Each of these stages is developed through a structured interview with a primary goal of developing and evaluating effective interventions.

Howell, K., & Nolet, V. (2000). *Curriculum-based evaluation: Teaching and decision making.* Belmont, CA: Wadsworth/Thomason Learning.
This book provides the background information necessary to conduct CBE as well as specific decision-making frameworks for the areas of reading comprehension, decoding, language, written expression, math, social skills, and task-related behaviors. A model for generating hypotheses regarding the causes of student problems and procedures to validate those hypotheses is outlined for each area. Interpretation guides are provided to assist with linking the evaluation results to teaching recommendations.

Reschly, D., Tilly, W. D., III, & Grimes, J. (2000). *Special education in transition: Functional assessment and noncategorical programming.* Longmont, CO: Sopris West.
This book represents the work of various authors around the nation who have direct experience with special education reform. Chapters are included on functional analysis assessment, curriculum-based evaluation, system reform rationale and trends, and problem-solving system components.

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Best Practices in Facilitating Intervention Adherence and Integrity

Cathy F. Telzrow and Jennifer J. Beebe
Kent State University

OVERVIEW

Intervention adherence is the degree to which an interventionist is committed to implement a specific treatment and actively demonstrates intervention-related behaviors (Meichenbaum & Turk, 1987). Related terms include *intervention fidelity* and *treatment integrity*, both of which refer to the degree to which a planned intervention is implemented as designed (Moncher & Prinz, 1991). Intervention adherence and integrity are critical for attributing student change to a specific intervention as well as for enhancing practitioners' ability to replicate and compare interventions across settings (Moncher & Prinz, 1991; Peterson & McConnell, 1996).

Despite the recognized importance of ensuring high levels of intervention adherence and fidelity as a means of enhancing outcomes for students, these key intervention elements are not well controlled for in either research or practice. Gresham, Gansle, Noell, Cohen, and Rosenblum (1993) examined a decade of published studies pertaining to school-based behavioral interventions, and reported that fewer than 15% evaluated and reported data concerning intervention fidelity. Similarly, investigations of pre-referral interventions in applied settings have reported that measures of treatment integrity are often absent (Telzrow, McNamara, & Hollinger, 2000).

Intervention adherence and integrity have relevance for a broad array of intervention contexts, including those directed toward individuals and families in medical, therapeutic, or counseling settings. This chapter discusses intervention adherence and integrity relative to academic and behavioral interventions in educational settings.

BASIC CONSIDERATIONS IN ENHANCING INTERVENTION ADHERENCE AND TREATMENT INTEGRITY

Intervention adherence and integrity can be enhanced by a series of professional decisions and actions. These include *selecting high probability interventions* and implementing these in ways that *promote intervention fidelity*.

High Probability Interventions

Theoretically, any treatment, including the nontraditional or ineffectual, can be implemented consistently and with good fidelity. However, maximizing positive outcomes for children's academic and behavioral functioning require that a combination of factors associated with the intervention and its implementation be present. The first of these is the selection of *high probability interventions*, meaning that they focus on keystone behaviors, have been empirically supported, and possess characteristics that cause them to be acceptable to interventionists and thus are more likely to be used.

FOCUS ON KEYSTONE BEHAVIORS

One of the first considerations when designing interventions is to select a behavior or skill that is critical for promoting behavioral change or enhancing the child's development (Gresham & Lopez, 1996; Lentz, Allen, & Ehrhardt, 1996). Such *keystone behaviors* are relevant to a specific disorder and can positively affect its course (Barnett, Bauer, Ehrhardt, Lentz, & Stollar, 1996). Such behavioral targets have been described as being *pivotal*, which means that when an identified target skill is enhanced, then improvements in a number of performance domains are evident. For example, for young children with autism, skills associated with motivation and responsivity to multiple cues are frequently targeted during intervention, since these are pivotal for developing other critical performances areas (Koegel, Koegel, & Carter, 1999). Additionally, keystone behaviors often produce positive collateral effects in teachers and parents. This means that by targeting a specific keystone behavior, the need for expensive, time-consuming, and complex interventions is reduced. A third characteristic of keystone behaviors is that they enhance positive instructional climates by reducing circumstances necessitating adverse interventions. For example, functional communication training is an important keystone behavior for students who exhibit self-injurious behavior, since this skill reduces the need for physical interventions (Carr & Durand, 1985).

EMPIRICALLY SUPPORTED

The second consideration in selecting high probability interventions is to choose a technique or procedure that has empirical support to improve the targeted behavior or skill. *Efficacious treatments* have been demonstrated to improve child performance or skill under highly controlled and often experimental conditions (Lonigan, Elbert, & Johnson, 1998). *Effective treatments* are those that have empirical support when implemented in applied settings, where high levels of internal control over the independent variables may not be possible (Lonigan et al., 1998). Experts generally recommend that the latter standard be employed when selecting high probability interventions, because it is more likely to be associated with higher levels of intervention adherence and fidelity (Lentz et al., 1996).

ACCEPTABLE TO INTERVENTIONIST

A third consideration in selecting high-probability interventions is the degree to which the treatment is acceptable to the interventionist. Some evidence suggests that treatment acceptability is an important variable in predicting intervention adherence and integrity (Elliott, Witt, & Kratochwill, 1991). As an example, Allinder and Oats (1997) examined teachers' acceptability toward the use of Curriculum-Based Measurement (CBM). They reported that teachers who rated CBM as highly acceptable administered CBM probes more frequently and set more ambitious goals for their students than did teachers who gave CBM low acceptability ratings. Furthermore, higher rates of implementation fidelity were associated with higher student math performance.

Other studies have reported findings that appear to contradict this relationship between intervention acceptability and implementation. For example, Turner, Watson, Watkins, Wildmon, and Little (in press) concluded that intervention acceptability may not predict high levels of treatment fidelity. Similarly, Peterson and McConnell (1996) reported that teacher ratings of intervention acceptability were weak predictors of intervention integrity among their sample of early childhood special education teachers. One reason for this finding may be that the teachers' acceptability ratings were obtained before the implementation of the intervention. It has been suggested that actual use of a specific treatment in an intervention setting is a better indicator of treatment acceptability than pretreatment ratings (Gresham & Lopez, 1996; Witt, 1997). Similarly, Odom, McConnell, and Chandler (1993) caution that teachers may rate interventions as acceptable, but not feasible, and the latter index is a better predictor of actual use.

Despite those recent findings and evolving conceptualizations of intervention acceptability, several factors have been shown to influence intervention acceptability, as well as subsequent levels of treatment adherence and fidelity. What follows is a brief description of the major elements associated with treatment acceptability, including ease of implementation, positiveness, perceived effectiveness, and consistency with the intervention setting.

Easy to Implement. A number of studies have reported that intervention adherence and integrity are enhanced when the interventions selected are easy to implement. Martens, Peterson, Witt, and Cirone (1986) found that teachers prefer treatments they can implement independently to those requiring consultation with others. Gresham (1989) reported that complex treatments requiring large amounts of time and materials or numbers of staff members to implement usually are not delivered with the same fidelity as those that are less involved. Lentz et al. (1996) concluded that "the more complex and time-consuming the intervention, the less likely it will be implemented as intended" (p. 129).

Although there is considerable support for those conclusions, exceptions do exist. For example, teachers appear willing to implement even complex interventions when the student's problem is severe (Elliott et al., 1991). Additionally, consultant coaching and support have been shown to enhance intervention adherence and treatment integrity even when the method used is complex (Northup et al., 1994). In a recently published article examining treatment integrity in educational programs for children with autism, Dietrich (1999) suggested that there might be occasions when an intervention has low acceptability but high fidelity. He suggests that such situations be examined to determine how fidelity may be affected when consultation is discontinued or how ratings of acceptability may change when a difficult-to-implement intervention is associated with significant student improvement.

Positive. A second characteristic of the intervention plan that may affect treatment acceptability, and therefore adherence, is the degree to which it is perceived as educative or positive. Clark and Elliott (1988) reported that teachers consistently favored interventions that employed positive (e.g., modeling, coaching) strategies over those that were perceived as punitive or aversive (e.g., overcorrection). Although teacher acceptability toward a negative intervention (i.e., exclusionary time out) has been reported to be higher than that of school psychologists or school social workers, all groups rated a positive intervention (i.e., token economy program) as more acceptable (Fairbanks & Stinnett, 1997). Furthermore, interventionists appear to maintain this preference for positive treatments and to judge these as more effective than other methods, even when provided with outcome data suggesting comparable results across treatments (Bihm, Sigelman, & Westbrook, 1997). Recent studies have suggested that acceptability ratings can be influenced by interventionists' exposure to the target individual and behavior, including through video vignettes (Foxx, Bremer, Shultz, Valdez, & Johndrow, 1996).

Perceived Effectiveness. Although the actual effectiveness of a specific treatment cannot be determined without a satisfactory trial of implementation, *perceived effectiveness* has been shown to relate to intervention acceptability. Perceived effectiveness refers to the degree to which the interventionist believes that the treatment is likely to address the identified concern. Lentz et al. (1996) assert that "change targets and goals must either directly overlap with the personal reasons for referral by the problem presenter, or problem solvers will need to logically persuade problem presenters to accept them" (p. 135).

Matches Intervention Context. Dietrich (1999) has suggested that the degree of compatibility between the intervention demands and the characteristics of the instructional environment can influence intervention integrity. Similarly, Lentz et al. (1996) contend that one characteristic of strong school-based interventions is that they are minimally disruptive to the classroom ecology. Furthermore, there is evidence that these contextual influences are bi-directional. For example, McConnachie and Carr (1997) reported that certain interventions (e.g., escape extinction) produce child behaviors that are punishing to teachers' efforts to maintain the treatment, and, in such circumstances, treatment integrity deteriorates over time.

Dietrich's (1999) discussion of these contextual considerations encompasses child and staff characteristics, as well as features of the intervention and the treatment setting. Other contextual factors that should be considered when choosing interventions include (a) the resources that are required for treatment, and the degree to which these are available in the instructional setting; (b) the consistency between the interventionist's training and the demands of the treatment; and (c) the characteristics of the child and how these might be related to intervention acceptability and treatment integrity (Dietrich, 1999).

Elements That Can Enhance Implementation Fidelity

Once high probability interventions have been identified and selected, the challenge lies in ensuring that these interventions are implemented correctly. Several practices can enhance intervention adherence and integrity, including the use of intervention scripts or treatment manuals, opportunities for guided practice and feedback, and the integration of treatment integrity checks and intervention monitoring.

INTERVENTION SCRIPTS OR TREATMENT MANUALS

One recommended method for enhancing intervention fidelity is the introduction of intervention scripts or treatment manuals into the implementation process. Such techniques are designed to provide interventionists a step-by-step protocol to follow during the implementation of the treatment. Intervention scripts that are collaboratively created, ecological in scope, and written using concrete and practical language have been rated by teachers and parents as acceptable, nonintrusive, and easy to use within daily routines (Ehrhardt, Barnett, Lentz, Stollar, & Reifin,1996). The use of scripts during intervention implementation also has been directly related to positive treatment outcomes (Ehrhardt et al., 1996; Hirallal & Martens, 1998).

Although Ehrhardt et al. (1996) suggest that scripts should be developed collaboratively with those intended to implement the intervention, more pragmatic considerations in script creation have been identified by other experts. Gottfredson (1993) and Moncher and Prinz (1991) emphasize the clear specification of implementation standards, including the quantity and quality of services to be provided, as well as any activities related to the implementation of intervention components. Moncher and Prinz (1991) suggest that intervention manuals must strike a balance between structure and flexibility, such that the interventionist is able to follow specific procedures while also adapting the intervention to meet the needs of the client. In addition, they recommend that treatment protocols must meet an intermediate level of specificity so that the procedures are neither too overwhelming to facilitate adherence nor too vague to implement with integrity.

GUIDED PRACTICE AND FEEDBACK

Opportunities for guided practice and feedback are additional factors in the facilitation of treatment fidelity. Even when provided with intervention scripts and knowledge from treatment manuals, interventionists may lack the skills to apply intervention techniques appropriately in the absence of opportunities for practice. Hirallal and Martens (1998) demonstrated the positive effects of teacher training on treatment fidelity in a study designed to teach classroom management skills to preschool staff. Their results implicated training methods such as modeling, role-play, and observation with feedback as instrumental in promoting treatment integrity.

In the absence of feedback, intervention implementation activities may substantially decrease. For example, McConnachie and Carr (1997) found higher levels of treatment integrity when the interventionist was guided by a "Bug-In-The-Ear" device, which permitted coaching to occur within the actual intervention setting through a hearing aid–type intercom system. Similarly, Jones, Wickstrom and Friman (1997) reported that consultation paired with performance feedback significantly increased treatment integrity levels over the provision of consultation alone. Finally, Mortenson and Witt (1998) demonstrated that weekly performance feedback from consultants increased levels of treatment integrity for teachers previously receiving little support.

In a 3-year program targeting behavioral problems in middle schools, Gottfredson (1993) found that the provision of effective feedback can vary in source from administrators to consultants to peers, as well as in frequency, from daily to weekly to periodic. Overall, providing a variety of opportunities for practice and feedback, as well as periodic booster sessions, can facilitate and help to maintain intervention adherence and treatment integrity (Moncher & Prinz, 1991).

TREATMENT INTEGRITY CHECKS/INTERVENTION MONITORING

A final strategy for promoting treatment adherence and integrity involves the incorporation of treatment integrity checks and intervention monitoring devices. In his critique of common assumptions concerning school-based consultation, Witt (1997) cautioned that practitioners should not assume that there is a correspondence between talking and doing or that talk produces change in behavior. Instead, he maintains that direct assessment of intervention adherence is required. Some methods of monitoring intervention activity include participant reports, outside sources, and evaluation of permanent products (Gottfredson, 1993; Moncher & Prinz, 1991).

There is a need to evaluate the perceptions of participants through self-reports to assess their understanding of the treatment and its progress (Moncher & Prinz, 1991). Although self-report data are often used to evaluate treatment integrity, there are limitations to this approach. For example, Wickstrom et al. (1998) reported significant discrepancies between levels of treatment fidelity reported by teachers (54%) and revealed by direct observation (4%). Such findings suggest that external sources may be preferred for the collection of reliable treatment integrity data.

Objective data collected from outside sources are described as the most useful in documenting intervention adherence and treatment integrity (Moncher & Prinz, 1991). Suggested practices for treatment integrity checks include using multiple observers who are adequately trained in data collection and coding as well as gathering multiple behavior samples to insure the representativeness of the data (Moncher & Prinz, 1991).

Review of existing records, such as service logs, activity sheets, and intervention scripts, also can provide data useful for evaluating the degree to which an intervention has been implemented as planned (Ehrhardt et al., 1996; Gottfredson, 1993; Hirallal & Martens, 1998; Jones et al., 1997).

The process of fusing high probability interventions with correct implementation is essential for effective school-based consultation. According to Witt (1997), these guidelines for practice may assist in bridging the gap between teachers' agreeing to an intervention (talk) and actually implementing that intervention (action). First, suggest interventions based on research (*high probability interventions*). Second, identify specific elements embodied within the intervention and create a checklist of these (*intervention script*). Next, provide participants with opportunities for training and support (*guided practice/feedback*), and monitor for accurate implementation (*treatment integrity checks*). Implementation of these guidelines is illustrated by the following best practices for facilitating intervention adherence and treatment integrity.

BEST PRACTICES IN ENHANCING INTERVENTION ADHERENCE AND INTEGRITY

As was illustrated by the basic considerations just reviewed, certain professional decisions and actions can enhance intervention adherence and integrity. These have been captured in nine professional practice recommendations concerning the selection of interventions and the conditions surrounding their implementation (Table 1). Research suggests that optimal outcomes for children's academic or behavioral concerns are derived from interventions that focus on keystone behaviors, have demonstrated efficacy, and are acceptable to interventionists. In addition to selecting high probability interventions, it is possible to enhance the fidelity of their implementation by using intervention scripts or treatment manuals, incorporating guided practice and feedback, and providing for treatment integrity checks or intervention monitoring. Specific best practice strategies that address these various components are described in the following sections.

Choose High Probability Interventions

CHOOSE INTERVENTIONS THAT ADDRESS KEYSTONE BEHAVIORS

Target goals for students should pass the "so what?" test, meaning that the identified skill or behavior warrants addressing in their educational program because acquiring the target behavior contributes to enhanced functioning (Kaplan, with Carter, 1995). Although it is often easier to target circumscribed, easily evaluated skills in a child's Individualized Education Program (IEP), such goals often don't pass the "so what?" test because they are trivial and unimportant for achieving meaningful educational progress. In contrast, preferred keystone behaviors broadly enhance the child's present and future functioning (Barnett et al., 1996). Three examples of keystone behaviors for children's school-based referrals that have been described by Barnett et al. (1996) are compliance training, communicative functions of behavior, and rule-governed behavior and self-regulation. Other examples, as well as non-examples, are included in Table 1.

CHOOSE INTERVENTION APPROACHES THAT HAVE EMPIRICAL SUPPORT

Despite the obvious importance of selecting treatment approaches that have been demonstrated to address identified needs, the use of unproven methods is a continuing concern in educational interventions (e.g., Cohen, 1998; Fuchs, 1991). A complete description of empirically supported interventions for children's academic and behavioral targets is beyond the scope of this chapter. However, a comprehensive

Table 1. Intervention elements that can enhance treatment adherence and integrity

Intervention element	*Definition*	*Examples*	*Non-examples*
Intervention focuses on keystone behavior	Behavior represents core performance domain that can enhance child's development and functioning	•Communication skill •Attention •Eye contact	•Bead stringing •Figure copying
Intervention has evidence of empirical support	The intervention has been shown to produce desired changes in academic or behavioral functioning when implemented in applied setting	•Phonemic awareness training •Functional communication training •Cognitive behavioral interventions for internalizing disorders	•Facilitated communication •Vision training as a reading intervention
Interventions are easy to implement	Interventions can be implemented without additional training, materials, or staff members	•Response cost •Contingency contracting	•Self-management •Class-wide peer tutoring
Interventions are positive	Interventions rely on constructive, educative approaches rather than those that are corrective or punitive	•Functional communication training	•Exclusionary time out •Escape extinction
Interventions have perceived effectiveness	Interventions are judged by the interventionist to address the specified concern	•Home-notes when homework completion attributed to insufficient parent supervision	•Curriculum-based measurement in instances where data not used to make teaching changes
Interventions are matched to contextual variables	Intervention matches resources, staff experience, and treatment philosophy of instructional environment	•Peer-assisted social and language interventions in an inclusive, developmentally appropriate preschool	•Discrete trial training in a developmentally appropriate preschool
An intervention script or treatment manual is used	Detailed intervention protocol, including specific verbiage and alternative responses	•See Table 2 for example	•An intervention that is identified only by a title or cursory description
Guided practice and feedback are provided to the interventionist	Ongoing technical assistance from a consultant during the intervention period	•Videotape or live models •Corrective feedback during implementation	•Interventionist implements intervention with no feedback or assistance
Treatment integrity checks or intervention monitoring systems are employed	Methods to document accurate implementation of the intervention	•See Figure 2 for example •Permanent products	•Absence of objective data about accurate implementation

initiative to inform practitioners about such interventions is currently in progress (Kratochwill & Stoiber, 2000). A Task Force on Empirically Supported Interventions in Schools, jointly supported by the American Psychological Association/Division 16 and the Society for the Study of School Psychology, began to compile published findings concerning empirically supported school-based interventions in 1999. Members of the Task Force, which is co-chaired by Tom Kratochwill and Karen Callan Stoiber, are identifying effective school-based prevention programs, school-based intervention programs for social behavior problems, academic intervention programs, and school-wide and classroom-based programs. It is anticipated that the ongoing work of the Task Force will be published in a variety of professional outlets, including a standing section on empirically supported interventions in *School Psychology Quarterly*.

CHOOSE INTERVENTIONS THAT ARE EASY TO IMPLEMENT

As was noted earlier, the literature on intervention acceptability has consistently reported that teachers favor interventions that are easy to implement over those that are more complex. However, ease of implementation is relative, since judgments about a treatment's complexity may be influenced by the nature of the student's problem, by the interventionist's training and experience, by the influence of the consultant, or by the material and human resources available within the intervention setting (Dietrich, 1999; Elliott et al., 1991; Graham, 1998). Despite the effects of such factors, in general treatment adherence and integrity are enhanced when an intervention is feasible, given the interventionist's skills and access to personal and systemic supports (Odom et al., 1993). A brief checklist or questionnaire can be used to ascertain the degree to which the teacher considers a proposed intervention acceptable because of implementation ease. Examples of such devices include the Abbreviated Acceptability Rating Profile (Tarnowski & Simonian, 1992) and the Intervention Rating Profile-15 (Martens, Witt, Eliott, & Darveaux, 1985). Single-item teacher ratings of intervention feasibility and ease of implementation also have been used (Fuchs, 1991; Odom et al., 1993).

CHOOSE INTERVENTIONS THAT ARE POSITIVE

Research has consistently identified a preference for constructive and educative treatments over those that are reductive or eliminative among interventionists in a wide array of settings (Elliott et al., 1991). Although there is evidence that aversive interventions are effective in addressing serious challenging behaviors (Mulick, 1990) and that exposing interventionists to individuals for whom such approaches are being considered enhances their acceptability ratings (Foxx et al., 1996), situations requiring such methods are likely to be rare. For this reason, as well as professional practice guidelines opposing the use of aversive interventions (Meyer & Evans, 1989), the selection of positive, educative interventions is recommended.

CHOOSE INTERVENTIONS THAT HAVE PERCEIVED EFFECTIVENESS

An additional professional practice suggestion that can enhance treatment adherence and integrity concerns the selection of treatments that are perceived as effective by the interventionist. This guideline suggests that the chosen intervention approach must be consistent with the teacher's beliefs about what is maintaining the problem, as well as his or her judgment about its potential to remedy that concern (Lentz et al., 1996). Fuchs (1991) refers to this as the degree to which interventionists view the proposed treatment as "worthwhile." During his work with pre-referral intervention teams, teachers were asked to rate proposed interventions on a 4-point scale, where "1" meant "not at all worth doing," and "4" meant "definitely worth doing." Use of a similar brief rating may assist in determining the perceived effectiveness of proposed interventions in school-based consultation settings.

CHOOSE INTERVENTIONS THAT MATCH THE TREATMENT SETTING

Intervention adherence and integrity are enhanced when the intervention disrupts the ecology of the treatment setting as little as possible (Lentz et al., 1996). In addition, interventions that are consistent with the philosophical approaches and training experiences of the staff also are likely to be implemented with greater fidelity (Dietrich, 1999). Dietrich (1999) provided several practical tools to assist in evaluating this match between the characteristics of the intervention and the treatment settings. These include observational systems to determine the frequency, timing, and individual targets of teacher-student interactions and descriptive analyses of instructional variables related to individual versus group setting, skills taught, and frequency of responses. According to Deitrich, "matching intervention to contextual variables in the classroom is valuable in ensuring treatment fidelity and success" (p. 617).

Incorporate Conditions to Enhance Treatment Fidelity

EMPLOY AN INTERVENTION SCRIPT OR TREATMENT MANUAL

As was noted earlier, it is not uncommon for interventionists to have high levels of commitment and enthusiasm about a given intervention, and to be actively engaged in implementing the chosen strategy, but to have poor levels of intervention integrity because of an inaccurate or incomplete understanding about how to implement it correctly. The use of intervention scripts or treatment manuals provides one remedy for this situation by providing teachers with a clearly detailed description of the chosen intervention.

Intervention scripts provide a step-by-step description of the treatment procedure. These are intended to incorporate sufficient detail to direct the accurate implementation of the strategy or technique, including what interventionists should say and how they should respond to a range of circumstances during the course of implementation. The potency of intervention scripts and treatment manuals for facilitating intervention fidelity has been demonstrated for a variety of interventions across diverse settings. The literature describing well-established and probably efficacious psychosocial interventions for childhood disorders recommends the use of treatment manuals as a mechanism for enhancing reliable implementation of the prescribed treatments (Lonigan et al., 1998). Fuchs (1991) reported that the addition of intervention scripts illustrating specific step-by-step guidelines for implementing contingency contracts and interval recording enhanced the fidelity of these prereferral interventions. Other studies have demonstrated the value of scripts for enhancing consistent application of contingent praise for preschool children (Martens & Hirallal, 1997), parent implementation of bedtime routines (Ehrhardt et al., 1996), and behavioral interventions to improve children's attending during small group art activities (Hiralall & Martens, 1998).

An example of an intervention script is contained in Table 2. This sample delineates the specific steps for implementing a response cost intervention to enhance hand raising and teacher recognition before speaking during circle time in a kindergarten classroom. Once the elements of the detailed intervention script are well understood by the interventionist, a flow-chart summarizing the procedure in graphic form may be used to provide a useful and abbreviated reference (Figure 1).

Table 2. Sample intervention script for response cost

Response cost is an effective strategy for assisting young children's acquisition of group/classroom skills. The response cost system involves allotting points to children at the beginning of a designated period and subsequently removing points for each instance of inappropriate behavior. A reward is given based on the number of points remaining at the end of the period. What follows is an example of how this intervention may be used to reduce calling out/speaking out of turn in a kindergarten classroom.

Step 1. Before Circle Time, make sure that the Hands Up chart has 10 cardboard silhouettes of hands on it.

Step 2. Begin instruction by showing the class that they have 10 hands on their chart, and remind them that they will need at least 3 hands on the chart after Circle Time in order to get free time later in the day.

Step 3. Remind the children to raise their hands and wait to be called on before answering.

Step 4. If a child raises his/her hand and waits to be called on, make eye contact and say, "Name, I like the way you raised your hand and waited to be called on!"

Step 5. Tally the total number of times verbal praise is given. ____________________

Step 6. If a child calls out without raising his/her hand and being called on, look at the child and say, "Name, you need to raise your hand and wait to be called on."

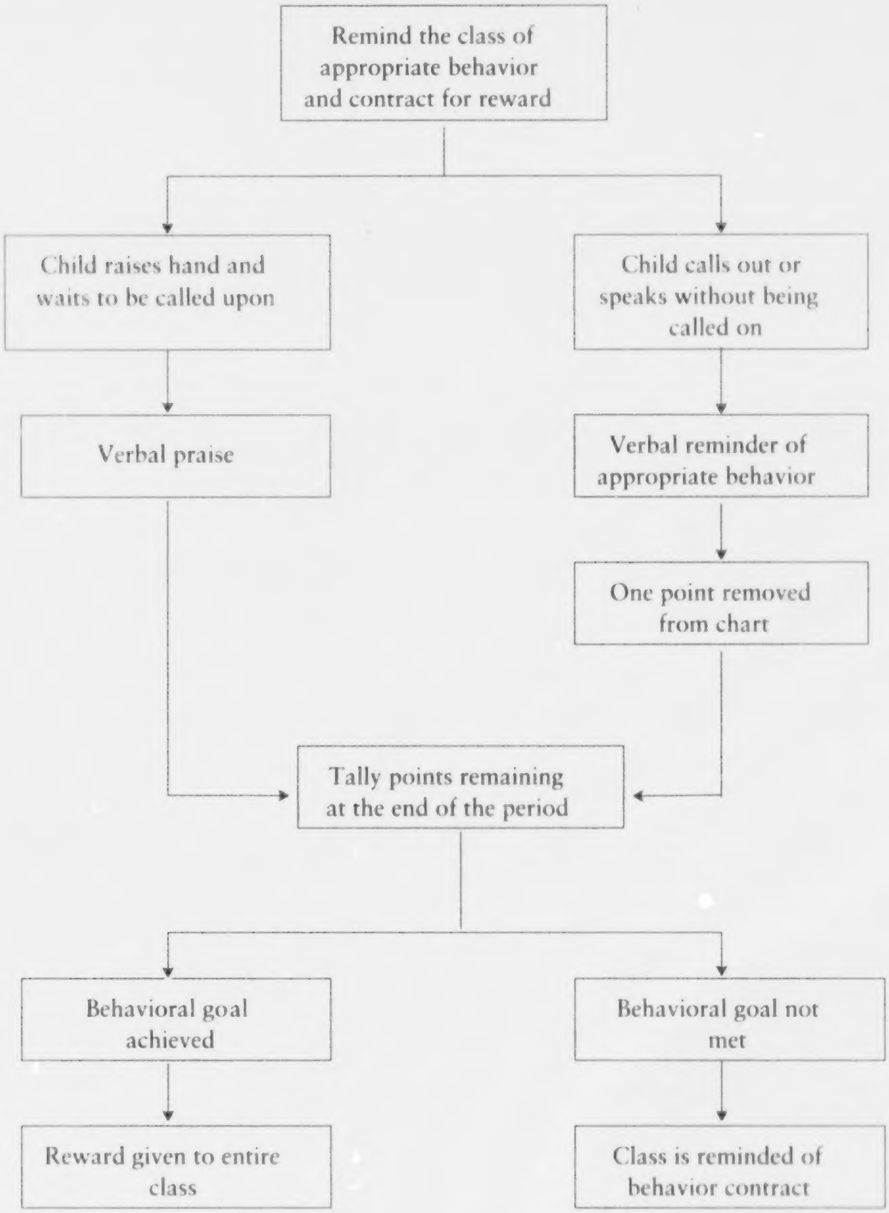
Step 7. Ask the child to remove one of the hands from the Hands Up chart.

Step 8. At the end of Circle Time, ask the children to look at their chart and count the number of hands left. (Number of hands left: ________)

Step 9. Either reward the class with 15 minutes of free time or remind the class that they will need to improve raising their hands and waiting to be called on so that they can earn free time tomorrow.

Step 10. Refer to the intervention script on fading response cost when the class earns free time consistently.

Figure 1. Flow chart of response cost intervention script


Remind the class of appropriate behavior and contract for reward
Child raises hand and waits to be called upon
Child calls out or speaks without being called on
Verbal praise
Verbal reminder of appropriate behavior
One point removed from chart
Tally points remaining at the end of the period
Behavioral goal achieved
Behavioral goal not met
Reward given to entire class
Class is reminded of behavior contract

PROVIDE GUIDED PRACTICE AND FEEDBACK

Even with the use of high probability interventions and an intervention script, interventionists may require guided practice, feedback, and coaching to produce consistent levels of implementation fidelity in actual settings. One arena for enhancing implementation fidelity in school-based settings is student-centered consultation, provided to an individual teacher or members of an educational team (Conoley & Gutkin, 1995). The success of this method for facilitating teacher change has been thought to be related to the consultant's influence, which may be derived from several bases. According to Erchul and Raven (1997), interventionists may be persuaded to persist in implementing a treatment because the consultant is perceived as having expert influence (i.e., they appear knowledgeable and credible). Additionally, an interventionist may be influenced by the referent qualities of the consultant, meaning that they are likeable and interact in a collaborative manner with the interventionist. Other possible sources of influence include the consultant's ability to coerce or reward, to employ legitimate power by virtue of position, or to influence through the use of information (Erchul & Raven, 1997).

O'Keefe and Medway (1997) suggest that one reason for teacher "resistance" to implement an intervention is that they believe they are unable to do so, either as a result of generalized self-efficacy deficiencies or because of reasons that are situation-specific. Some research suggests that this impediment to intervention implementation may be addressed by providing vicarious models and verbal persuasion. Specifically, Hagen, Gutkin, Wilson, and Oats (1998) reported that pre-service teachers who were shown videotape vignettes of teachers successfully implementing behavioral techniques with challenging students had higher self-efficacy scores in the areas of personal teaching and classroom management than control teachers who viewed a placebo videotape. These findings suggest that published programs that incorporate video vignettes demonstrating the use of specific interventions (e.g., Beck, 1996) could be employed to enhance implementation fidelity.

Despite the persuasive arguments of Conoley and Gutkin (1995), others have suggested that exclusive reliance on indirect methods of teacher technical assistance through consultation may impede optimal levels of implementation fidelity (e.g., Jones et al., 1997; Watson & Robinson, 1996; Witt, 1997). Watson and Robinson (1996) have proposed the use of direct behavioral consultation, in which skills are taught to interventionists by using direct instruction strategies. In this method the consultant explains the procedure to the interventionist, models its use with the target student, and remains available to give corrective feedback as teachers begin the implementation process. Hirallel and Martens (1998) employed a five-step teacher training process consisting of (a) a description of the technique, (b) demonstration, (c) practice, (d) feedback, and (e) application in the instructional setting. Corrective feedback occurred during individual conferences and consisted of specific praise for accurate implementation and explicit models for improving accurate implementation. Jones et al. (1997) described a feedback procedure that incorporated a rationale for its use, data summaries of implementation fidelity and student responses, and an explanation of ways to improve integrity. It has been suggested that direct instruction methods of providing technical assistance may be particularly effective when the intervention is complex or when interventionists have restricted specialized knowledge (Hiralall & Martens, 1998; Northup et al., 1994; Watson & Robinson, 1996). The use of periodic booster sessions to ensure continued accuracy of implementation following initial mastery of an intervention also has been recommended (Moncher & Prinz, 1991).

EMPLOY TREATMENT INTEGRITY CHECKS

Because of the tendency for accurate implementation to deteriorate over time, incorporating explicit treatment integrity checks is recommended. A variety of methods may be employed, including self-monitoring strategies, external observational systems, examination of permanent products, and program-wide fidelity checks.

Self-monitoring and external observational systems typically utilize a checklist of the major intervention elements, together with a rating scale on which the interventionist can record whether or not each was implemented. An example of a treatment integrity check for the response cost intervention described earlier is depicted in Figure 2. Although self-monitoring systems have the advantage of being nonintrusive and relatively easy to use, some data suggest that interventionists may overestimate their rates of fidelity when using such systems (e.g., Wickstrom et al., 1998). For this reason, more objective measures of implementation fidelity, such as external observations or the use of permanent products, are recommended. In addition, employing multiple observers and sampling across implementation sessions is suggested (Moncher & Prinz, 1991).

Many interventions are conducive to the use of permanent products as a source for documenting treatment integrity. For example, daily home notes to parents, assignment completion recording systems, and daily journaling activities all incorporate written

Figure 2. Sample treatment integrity check for response cost

Teacher: ____________ Date: __________ Day: M T W Th F

Instructions: For each step in the intervention, check "Y" if the step is completed or "N" if the step is not completed.

Intervention steps	Y	N
Checked that Hands Up chart has 10 cutout hands before Circle Time.		
Remind class of the Hands Up chart and behavioral contract.		
Remind class of the appropriate behavior (raise hand and wait to be called on).		
Praise children individually for appropriate behavior.		
Tally total number of times children are praised for the appropriate behavior. ______________		
When calling out/speaking out of turn occurs, remind child of appropriate behavior and direct child to remove one hand from the Hands Up chart.		
Count the number of hands left on the chart immediately following Circle Time. ________________		
Provide the class with a reward if more than three hands remain. OR Remind the class of the behavioral contract if less than three hands remain.		

records that can be collected and evaluated for their frequency and completeness of implementation.

Comprehensive systems to track intervention fidelity within programs and agencies have been described by Gottfredson (1993) and LaVigna, Willis, and Sweitzer (1990). In these approaches the program components determined to be critical for producing student improvement are described and standards of implementation are specified. Data regarding implementation fidelity are collected through permanent products or external observation. When discrepancies between specified performance standards and actual implementation are identified, these signal the need to intervene in the system to enhance implementation fidelity.

SUMMARY

This chapter has identified practices that can enhance intervention adherence and integrity. These include (a) targeting socially valid behaviors; (b) addressing these through interventions that have empirical support, as well as other characteristics that increase the probability that they will be implemented (e.g., easy to use, positive, perceived to be effective, and matched to the intervention context); (c) employing an intervention script to increase reliable implementation; (d) providing feedback and technical assistance to interventionists; and (e) incorporating treatment integrity checks. The relative contributions of these practices to maintaining satisfactory levels of implementation fidelity are unknown. However, since some recent research has suggested that combining approaches may produce the highest levels of treatment integrity (e.g., Hiralall & Martens, 1998), incorporating as many of these practices as possible is recommended.

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Dietrich, R. (1999). Increasing treatment fidelity by matching interventions to contextual variables within the educational setting. *School Psychology Review, 28*, 608–620.
This article describes a method of enhancing treatment fidelity by matching intervention characteristics to contextual variables such as classroom culture, student-teacher interactions, and available resources. Practical systems for assessing instructional environments in order to improve the "goodness of fit" between the intervention and the instructional ecology are included.

Hiralall, A. S., & Martens, B. K. (1998). Teaching classroom management skills to preschool staff: The effects of scripted instructional sequences on teacher and student behavior. *School Psychology Quarterly, 13*, 94–115.
Multiple approaches to treatment adherence and integrity principles were implemented with teacher-student dyads. The results support the use of direct instruction sequences and intervention scripts in teacher training, and implications for school psychology practice are discussed.

Lentz, F. E., Jr., Allen, S. J., & Ehrhardt, K. E. (1996). The conceptual elements of strong interventions in school settings. *School Psychology Quarterly, 11*, 118–136.
This article provides an excellent discussion of many of the practices discussed in this chapter, including socially valid and empirically supported interventions, treatment acceptability, and achieving a match between the intervention and the instructional ecology. Tables provide useful summaries of characteristics of strong school-based interventions for both academic and behavioral concerns.

Moncher, F. J., & Prinz, R. J. (1991). Treatment fidelity in outcome studies. *Clinical Psychology Review, 11*, 247–266.
This review of psychosocial treatment outcome studies during the decade of the 1980s provides an excellent discussion of factors related to intervention and integrity. This first-rate foundational reference addresses such practices as treatment manuals, supervision of treatment agents, and integrity monitoring checks.

Watson, T. S., & Robinson, S. L. (1996). Direct behavioral consultation: An alternative to traditional behavioral consultation. *School Psychology Quarterly, 11*, 267–278.
An alternative to traditional consultation—*direct behavioral consultation*—is proposed. The authors provide a detailed rationale for pursuing a more active approach to consultation, along with descriptive examples of how model can be implemented in school-based settings. Future directions for research of this model are also discussed.

35 Best Practices in Evaluating Interventions

Mark Steege and Rachel Brown-Chidsey
University of Southern Maine
F. Charles Mace
University of Wales

OVERVIEW

School psychologists and educational teams make critical decisions that significantly affect the lives of students and their families. Decisions based on subjective and anecdotal report alone may result in ineffective or harmful interventions and/or the discontinuation of otherwise effective interventions. Decisions based on accurate, reliable, and socially meaningful data allow the team to make informed decisions that result in positive and significant behavioral change. The collection and analysis of meaningful data positively influence the effectiveness and interventions. For example, Fuchs and Fuchs (1986) found that teachers were more effective and efficient in their delivery of instructional programs when educational decisions were based on student performance data instead of subjective teacher judgment. Student performance data (e.g., increased reading comprehension, increased prosocial behavior, decreased aggressive behavior, decreased oppositional behavior) are the measured results of interventions orchestrated by the educational team. These data directly document behavior change and, indirectly, document the performance of the professional(s) responsible for planning and implementing the intervention.

On one level it may be enough to know that the behavior of a student changed for the better upon implementation of an intervention. However, a best practices approach to the evaluation of the effectiveness of interventions requires a demonstration of a functional relationship between the intervention and the resulting data (Steege, & Wacker, 1995). When practitioners show that a specific intervention causes a behavior to change, a functional relationship between the procedure and the target behavior(s) is demonstrated. A functional relationship is established when (a) the target behavior changes when an independent variable (an intervention) is manipulated, while all other variables are held constant, and (b) the process is replicated or repeated one or more times and the behavior changes each time (Miltenberger, 1997).

A best practices approach to the evaluation of the efficacy of interventions involves the use of single-case experimental designs to demonstrate a functional relationship between the intervention and the behavioral measures. By using single case experimental designs, the school psychologist is able to demonstrate that the intervention was responsible for the measured change in behavior and rule out the possibility that confounding variables caused the behavior to change. The following sections will discuss several issues that are critical to the measurement of intervention outcomes and to the validation of functional relationships.

Single-Case Experimental Designs

Unlike group research designs, which include an experimental and control group, single-case experimental designs involve the study of a single unit before, during, and following the introduction of an intervention. The unit of analysis may be one student in the classroom or a group of students in a third-grade classroom (Lundervold & Belwood, 2000). Single-case experimental methodology does not rely upon statistical tests to determine the significance of interventions. Rather, the data for each subject (or unit) are displayed in a graph that can be visually inspected to analyze the impact of the intervention on the target behavior (Polaha & Allen, 1999).

Why Single-Case Experimental Designs?

Polaha and Allen (1999) and Steege and Davin (2000) have identified a number of reasons why single-case experimental design is a best practices approach for evaluating the effectiveness of interventions:

1. Collecting data on a single subject versus groups of subjects is cost effective
2. Data can be analyzed without the use of complicated statistics
3. Objective determination of student progress is documented
4. Ongoing evaluation of interventions allows the team to quickly identify effective and ineffective components and to make necessary adjustments to the interventions
5. Practitioners have an ethical responsibility for evaluating the efficacy of interventions
6. Federal, state, and agency regulations require documentation of intervention effectiveness

Single-case experimental designs control for threats to internal validity (and render rival hypotheses less plausible) in the following ways: (a) They establish within-condition (baseline) variability in the student measures via repeated assessment, (b) they introduce an independent or intervention variable, (c) they document the effects of the intervention through repeated measurement, and (d) they replicate the intervention effect via repetition of the baseline and intervention conditions. When both the introduction and the withdrawal of the intervention results in behavior change, a functional relationship between the intervention and the student's behavior change is demonstrated. Moreover, the introduction and/or withdrawal of the intervention must result in a relatively immediate impact on trends in the student's behavior. Finally, when the student's behavior change is replicated, one can be more certain that the intervention resulted in the desired behavior change. With single-case designs, replication is demonstrated with the individual student across time, settings, behaviors, or personnel. In addition, the intervention may be replicated across students or similar behaviors (Steege, & Wacker, 1995).

BASIC CONSIDERATIONS

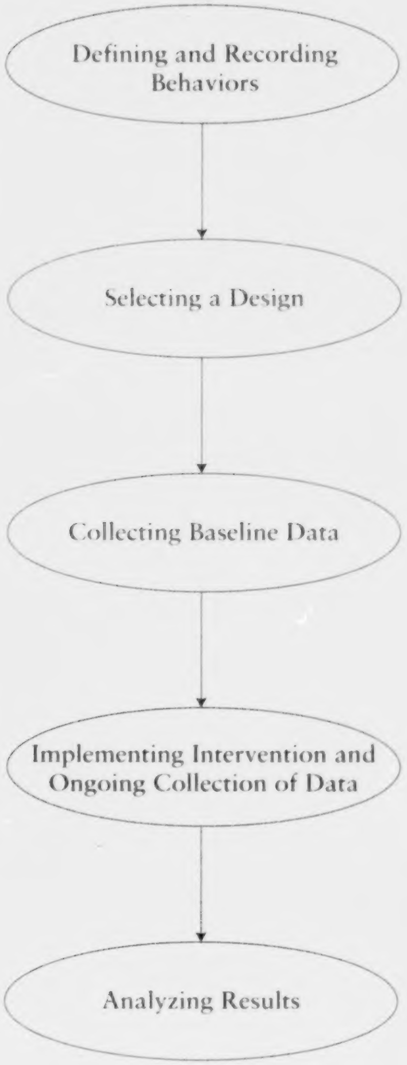
Stages of Evaluation

Evaluating interventions is a process. While at some level this process often begins at the point of referral for assessment and intervention, for the purposes of this chapter we are introducing the stages of evaluation that would be used after functional assessment has been conducted and the team has collaborated in the design of an intervention. Within our model, the evaluation process consists of five stages: (a) defining and recording behaviors, (b) selecting a design, (c) collecting baseline data, (d) implementing the intervention and ongoing collection of data, and (e) analyzing results (see Figure 1). Each stage will be described, and examples of best practices for evaluating interventions will be provided.

Defining and Recording Behaviors

The initial step in evaluating the effectiveness of an intervention involves identifying and describing the behaviors that are expected to change as a function of the intervention. Specifically, the school psychologist needs to develop unambiguous and concise definitions of target behaviors. Behaviors need to be described in a way that is understandable to all members of the team. Specifically, this means that after reviewing a written description of a target behavior, two observers should be able to observe a student and agree that the target behavior occurred. As a general rule, a description of behavior should meet three criteria: objectivity, clarity, and completeness (Kazdin,

Figure 1. Stages of evaluation


Defining and Recording Behaviors
Selecting a Design
Collecting Baseline Data
Implementing Intervention and Ongoing Collection of Data
Analyzing Results

1994). To be *objective*, the description of behavior should refer to observable features. To be *clear*, the definition should be so unambiguous that it can be accurately repeated, and paraphrased by others. To be *complete*, the definition must delineate the observable characteristics of the behavior. Therefore, it is recommended that, before deciding behavior recording procedures, the school psychologist should conduct a brief anecdotal observation to identify behavioral features, setting events, and so forth, and select a method of recording that will yield the most reliable and valid data.

The best practices method of collecting performance data is by direct recording of student behaviors. Direct measurement of behavior enables the school psychologist to objectively document behavior change. The most frequently used method of measuring behavior is direct observation and recording. There are several methods of direct observation data collection, including frequency recording, duration recording, and interval recording. Each of these procedures has advantages and disadvantages. The selection of a measurement procedure should be driven by (a) the dimensions of behavior (i.e., topography, frequency, duration), (b) the goals of the intervention, and (c) pragmatic considerations such as time, resources, and competency of observers.

It is also important to convert raw data to rate measures. The relative occurrence and disruptiveness of behavior may change as a function of the length of the school day. For example, a student may display 12 occurrences of aggressive behavior during a 6-hour school day (a rate of 2.0 occurrences of aggressive behavior per hour) or 12 occurrences of aggressive behavior during a 3-hour school day (a rate of 4.0 occurrences of aggressive behavior per hour). The occurrence of aggressive behavior is actually very different when rate is considered. If only the daily total was reported, then the occurrence of those behaviors would be identical (i.e., 12 per day). By contrast, reporting of rate more accurately reflects the level of occurrence and disruptiveness.

The following sections include descriptions and examples of data recording procedures that are commonly used within single case experimental design methodology. The examples in Figures 1, 2, 3, and 4, in addition to illustrating examples of data recording procedures, provide examples of clear, unambiguous descriptions of behaviors.

FREQUENCY RECORDING

Frequency recording involves observing, counting, and recording the number of times a behavior has occurred. This procedure typically is used to record occurrences of discrete, low rate behaviors (i.e., behaviors that have a definite beginning and end and that do not often occur). Frequency recording, while often a very accurate method of recording discrete behaviors, tends to provide an underestimation of sustained behaviors (e.g., time on-task), an inaccurate record of very high rate behaviors, and the potential unreliabil-

Figure 2. Example of frequency recording procedure

Target Behavior:	Self-injurious face slapping
Definition:	Katrina raises her right hand to her face, and from a distance of 6 inches or greater, strikes herself in the face with the open hand.
Procedure:	using a tallying system, record each time that the hand strikes the face (i.e., each occurrence).
Self-injurious face slapping:	𝍸 𝍸 ||
Program hours:	6
Frequency:	12
Rate:	2 occurrences per hour

Figure 3. Example of duration recording procedure

Target Behavior:	Tantrum behavior
Definition:	A response set including 2 or more of screaming, crying, throwing objects/materials, flopping to the floor, and kicking objects.
Procedure:	using a stopwatch, record the length of time from the onset to the end of the behavioral response set.
Tantrum behavior:	2'4", 8'10", 9'00", 12'00"
Program hours:	6
Frequency:	4
Rate:	.67 per hour
Cumulative duration:	32 minutes
Average duration:	5.33 minutes per hour

Percent duration (i.e., percent of time in which person displayed tantrum behavior):

$$\frac{\text{32 minutes}}{\text{360 program minutes}} = .08 \quad = 8\%$$

Figure 4. Example of b-s partial interval recording procedure

Target Behavior: On-task behavior

Definition: visual, motor, and/or verbal active participation in tasks and activities

Procedure: 6 s partial interval recording procedure
Record a "+" in each 6 s interval if on-task behavior occurred (even for only a brief instance).
Record an "0" in each 6 s interval if on-task behavior did not occur.

	6	12	18	24	30	36	42	48	54	60
1 min	+	0	+	0	0	+	+	0	0	+
2 min	1	+	0	0	+	+	0	+	0	+

Percent occurrence =

$$\frac{\text{number of "+" intervals}}{\text{total number of intervals}} \text{ X } 100$$

Example:

$$\frac{10}{20} \text{ X } 100 = 50\% \text{ occurrence of on-task behavior}$$

ity of observations when behavior onset and cessation are difficult to discriminate. Figure 2 illustrates the application of a frequency recording procedure.

DURATION RECORDING

This procedure involves observing, timing, and recording the total amount of time a behavior has occurred. It is most applicable in recording continuous behaviors (e.g., sustained behaviors such as on-task and stereotypy). Duration recording is typically done by stopwatch and can be expressed as a percentage of time. It is difficult to use in measuring high rate, short duration behaviors, and multiple behaviors. Figure 3 illustrates the use of a duration recording procedure.

INTERVAL RECORDING

This procedure involves observing and recording the occurrence and nonoccurrence of behaviors at predetermined units of time (i.e., "intervals" ranging from several seconds to several minutes or even hours). Three types of interval recording procedures are (a) whole interval in which a behavior is recorded only if it was observed to occur during the *entire* interval, (b) partial interval in which a behavior is recorded if it was observed for *any part* of the interval, and (c) momentary time sampling in which the observer looks at the student only at predetermined intervals and notes if the target behavior is occurring at the precise moment the observation occurs.

Momentary time sampling procedures can be used to record a wide range of behaviors and allow for simultaneous observation and recording of multiple behaviors. While applicable to a wide range of behaviors, these procedures provide only an estimate of behavior. The reader is cautioned, however, that whereas whole interval recordings tend to underestimate the occurrence of behavior, partial interval recordings tend to overestimate the occurrence of behavior. Figure 4 displays a 6-s partial interval recording procedure that was used to measure the behavior of a student who had been referred to the school psychologist for functional behavior assessment of on-task behavior.

Of these three methods, whole interval recording is recommended when continuous occurrence of the target behavior is expected (e.g., when recording sustained attention to task). Partial interval recording is preferred for measurement of high-frequency, and rapidly occurring (e.g., self-injurious head banging) behaviors. Momentary time sampling is useful when continuous observation of a student is not practical, or when an observer is monitoring and measuring target behaviors with several students in one setting. It should be noted that interval recording procedures provide only estimates of rate and duration of occurrence of target behaviors. The results of observations are reported in terms of the number of percentage of intervals in which target behaviors occur. Of the interval recording procedures, partial interval recording is the most frequently used.

LIKERT-BASED INTERVAL RECORDINGS

These procedures involve observing and rating a behavior according to a predetermined scale as an estimate of occurrence, duration, and/or intensity of behaviors. Likert ratings can be used to record a wide range of behaviors. This procedure is typically used when frequency, duration, partial interval, or whole interval procedures are not practical given the professional responsibilities, resources, and experience of the observers. Likert-based interval recording procedures can be used simultaneously to record multiple behaviors (both adaptive and interfering). A particular advantage of this procedure is the capacity simultaneously to provide direct instructional/behavioral supports and recording of data. While Likert ratings of complex student behaviors have been found to have acceptable levels of reliability and validity (Steege & Davin, 1999), these methods may yield inaccurate results, especially with novice evaluators. Examples of the use of Likert ratings have included measures of the intensity of behavior (e.g., Iwata, Pace, Kissel, Nan, & Farber, 1990) and estimates of the relative occurrence of behavior (e.g., Romanczyk, 1996; Steege & Davin, 2000).

PERMANENT PRODUCT RECORDING

Another aspect of a behavior that may be recorded is its product. Permanent product recording is used when a behavior results in specific *tangible* outcomes (Miltenberger, 1997). This procedure involves recording the number of products (e.g., number of homework assignments completed, number of bottles sorted accurately). It is used to record a wide range of products, or outcomes, of behavior. One advantage of this method is that the observer need not be present when the behavior occurs. One possible drawback to this procedure is that practitioners cannot always determine who exhibited the behaviors that led to the product recorded. For example, a teacher cannot determine whether a student completed his or her own homework, whether assistance was provided, or whether someone else completed the assignments.

INTER-OBSERVER AGREEMENT

An important consideration in measuring student behavior is the reliability of the recording method. Reliability of measurement is usually defined in terms of inter-observer agreement. Inter-observer agreement refers to common findings by two or more observers or raters on the occurrence and nonoccurrence of target behaviors, the ratings of behaviors, or the ratings of permanent products. There are several methods of determining the degree of inter-observer agreement. The most commonly used method involves calculating the ratio of agreements to the total number of recordings of behavior. For example, suppose that using an event recording procedure to measure a student's social interactions during morning recess, two observers simultaneously and independently observed and recorded initiations of peer-directed social interactions. The primary observer recorded 12 occurrences of the target behavior while the secondary observer recorded 10 occurrences of the behavior. The total number of recordings of behavior was 12. The number of agreements was 10, resulting in the following ratio:

$$\frac{10}{12 = .83 =}$$

83% inter-observer agreement

Generally, an inter-observer agreement percentage at or above 80% or greater is considered the standard for concluding that the measurement of student behavior is reliable and valid. It is recommended that inter-observer agreement data must be conducted for 25–30% of the sessions/samples. During the evaluation of the effectiveness of an intervention, the school psychologist could serve as the primary observer/rater to measure student behavior, and a trained secondary observer/rater could be enlisted simultaneously, but independently, to measure student behavior. In situations in which a second observer/rater is unavailable, videotaping a sampling of sessions may be conducted. The videotape can then be viewed and behaviors recorded with a second observer.

Selecting a Design

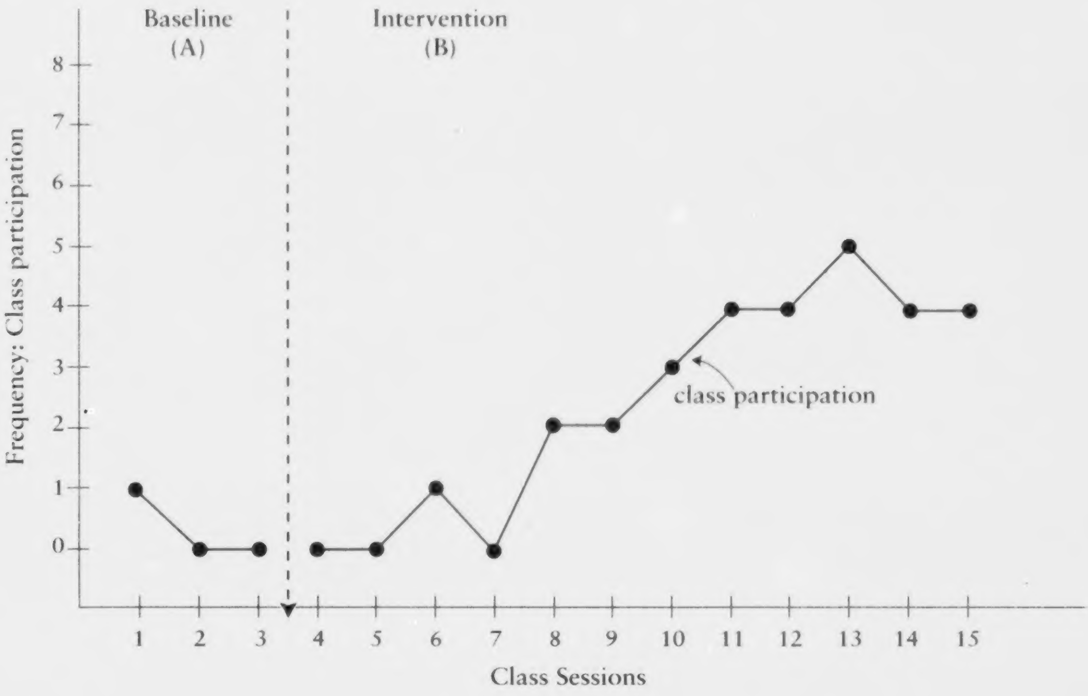
CASE STUDY (AB) DESIGN

The Case Study design is the most basic of single-case experimental designs (Polaha & Allen, 1999). This design simply includes a baseline phase (A) and an intervention phase (B). First, baseline measures are repeatedly taken until stability in behavior is demonstrated. The intervention then is introduced and an appropriate number of measurements are made during this second phase. If, according to the data, behavior improves during the intervention phase, then the effectiveness of the intervention is presumed to have been demonstrated. Figure 5 illustrates an example of the Case Study (AB) method.

In this example, class participation was defined as raising a hand and, when called upon verbally, contributing relevant information to the class discussion. The team reviewed various data recording procedures and decided that a frequency recording procedure would yield the most accurate and valid measures of class participation. During Baseline (A), the teacher lead class discussions and recorded the number of times that the student exhibited the target behavior; this ranged from zero to one time over three sessions. The intervention involved several components, including (a) an advanced organizer that outlined key issues of the discussion, (b) a rehearsal strategy, and (c) self-monitoring. When the intervention package was implemented, an increase in class participation behavior was observed. Over time, class participation increased to a stable level of responding. Social validity measures, involving the recording of class participation of classmates, indicated the intervention resulted in levels of class participation that was comparable to 80% of the student's peers.

While the results of this investigation suggest that increased class participation was directly related to

Figure 5. Example of case study (AB) method



the intervention, it is not fully known whether the behavior change resulted from the treatment or from extraneous variables, or whether class participation would have increased naturally without the intervention. It is most often used in applied, non-research situations where practitioners are primarily interested in documenting and facilitating behavior change (Miltenberger, 1997). Thus, while the AB method may be useful for documenting a student's progress, it does not allow us to demonstrate a functional relationship between the intervention and the changes in student behavior. To control for rival hypotheses, and to demonstrate a functional relationship between the intervention and behavioral outcomes, the school psychologist must use a more sophisticated experimental design.

ABA AND ABAB DESIGNS

These designs are initially identical to the case study method; however, following the intervention phase a return to the baseline conditions is introduced (i.e., the intervention is briefly withdrawn, depicted as ABA). If the student's behavior is improved during the intervention phase and then reverses to baseline levels when the intervention is withdrawn, then a functional relationship and, thus, the effectiveness of the intervention, has been demonstrated. In short, with an ABA design, improvements in behavior occur only when the intervention is being implemented.

A major concern with an ABA design is an ethical one, because the intervention is terminated with the student not receiving what has been demonstrated to be effective. To address this issue, a return to the intervention phase is recommended. The ABAB design is identical to the ABA design with the addition of a replication of the intervention. In addition to addressing ethical objections to an ABA design, the ABAB design strengthens the conclusion about the effectiveness of the intervention by demonstrating positive treatment effects twice. In short, the second B phase is a systematic replication of the intervention.

A number of considerations must be taken into account when using the ABAB design. First, the withdrawal of an effective intervention may result in the recurrence of dangerous behavior (e.g., self-injury, aggression). Second, one must be fairly certain that the behavior will return to baseline levels when the intervention is withdrawn. If the behavior fails to change when the intervention is withdrawn, then a functional relationship is not demonstrated (Miltenberger, 1997). Finally, one needs to consider if indeed it is possible to withdraw the intervention. If the intervention involved teaching a skill, then one sometimes cannot simply withdraw the learning that has occurred.

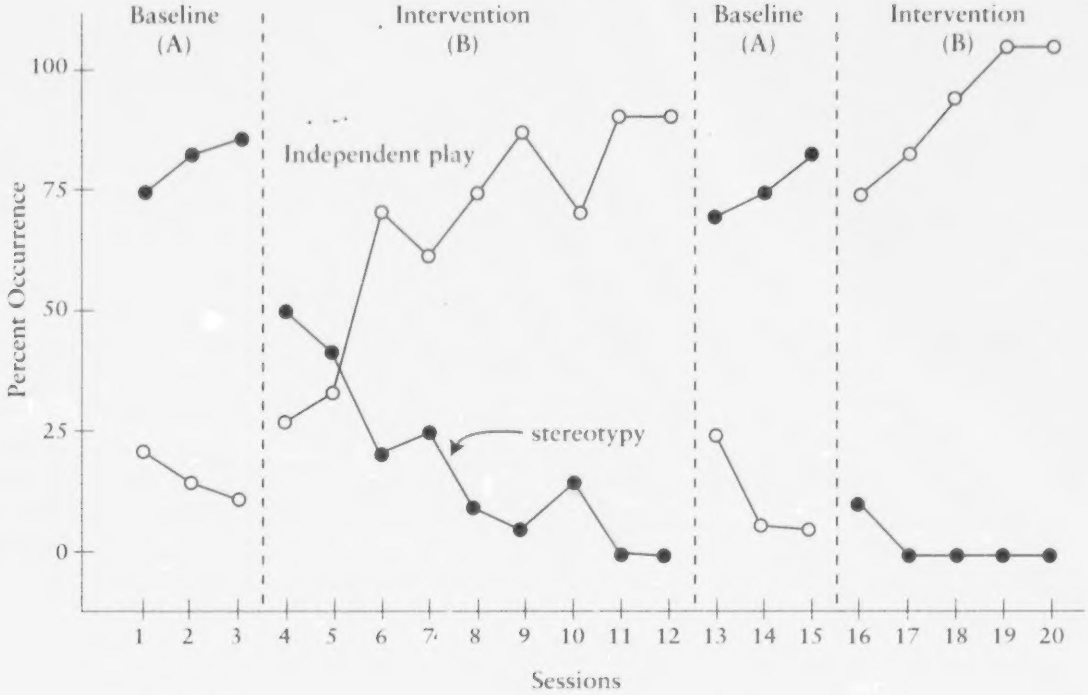
Figure 6 illustrates the application of an ABAB design. In this example, the school psychologist collaborated with the special education teacher in developing and implementing an intervention that *increased* the independent play behavior and *decreased* stereotypic behavior of a student with autism. Independent play and stereotypes were operationally defined and measured by using a 10-s partial-interval recording procedure. During the initial baseline phase (sessions 1, 2, and 3), high levels of stereotypic behavior and low levels of independent play were recorded. During the initial intervention phase, the student was instructed to use a picture activity schedule that served to guide him through a series of preferred play activities. The intervention resulted in marked increases in independent play behavior and decreases in stereotypic behavior.

To demonstrate that the picture activity schedule was a necessary component of the intervention, it was withdrawn (second A phase) for three play sessions, resulting in a return of target behaviors to baseline levels of responding. When the picture activity schedule was reintroduced (second A phase), stereotypic behavior decreased and independent play behavior increased. This design demonstrated a functional relationship between picture activity schedules and an increase in independent play as well as a decrease in stereotypy.

MULTIPLE BASELINE DESIGNS

Multiple baseline designs are an extension of the case study methodology. With multiple baseline designs, functional relationships between the intervention and target behaviors can be inferred according to the following criteria: (a) repeated measurement of a behavior across a minimum of two baselines, (b) lagged introduction of treatment across baselines, (c) immediately observed effects of intervention, and (d) no observable effects in conditions in which the intervention has not been implemented (Rusch, Rose, & Greenwood, 1988). Multiple baseline designs are frequently used to evaluate the effectiveness of interventions, particularly for those interventions in

Figure 6. Example of withdrawal (ABAB) design



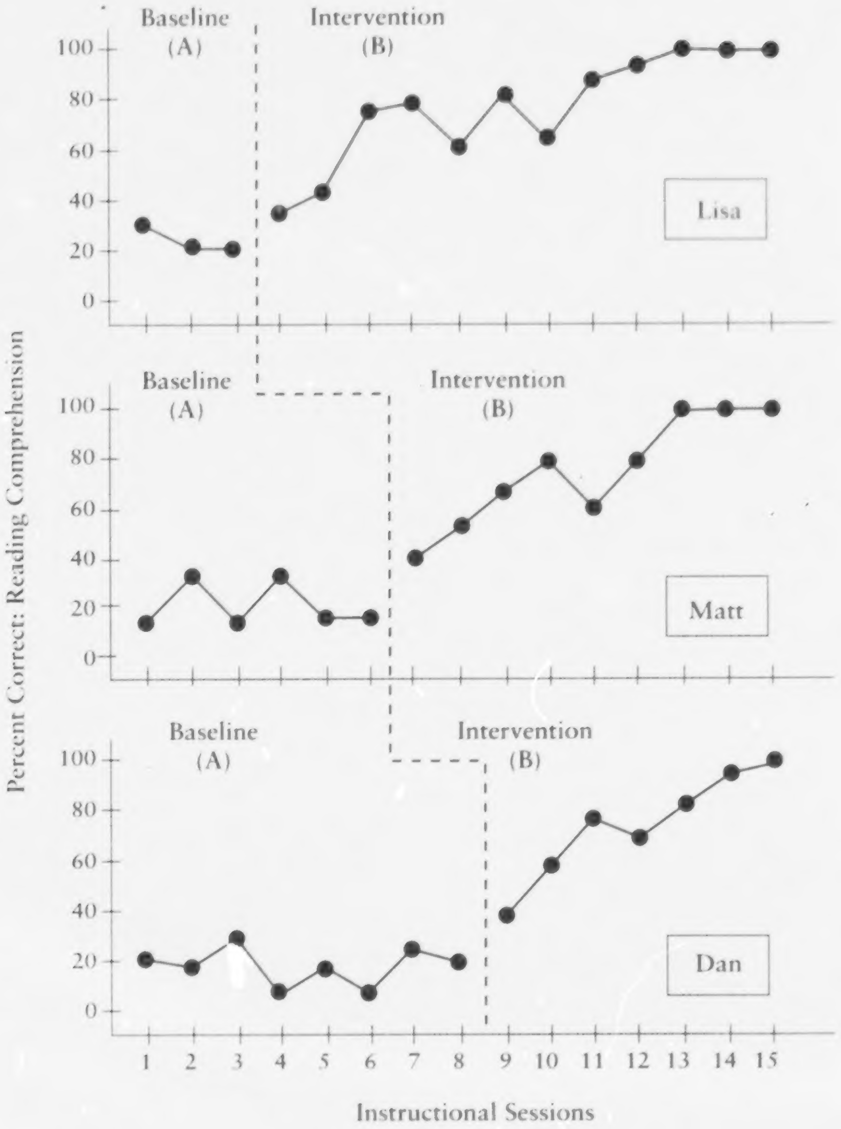
which it is not practical to utilize a withdrawal condition (i.e., when target behavior is not expected to return to baseline if the intervention is taken away).

Generally, there are three types of multiple-baseline designs. In a multiple-baseline-across-subjects design, there is a baseline and a treatment phase for the same target behavior of two or more different subjects. In a multiple-baseline-across-behaviors design, there is a baseline and treatment phase in the same setting for two or more different behaviors of the same subject and setting. Finally, with a multiple-baseline-across-settings design, there is a baseline and treatment phase for two or more settings in which the same behavior of the same subject is measured.

For example, the school psychologist might use a multiple-baseline-across-behaviors design to evaluate the effectiveness of an intervention sequentially to teach a student with developmental disabilities three different community living skills (e.g., laundry skills, public transportation skills, personal grocery shopping skills). By utilizing a multiple-baseline-across-students design, the school psychologist could evaluate the effectiveness of a social skills training intervention to increase the prosocial behavior of five students in the context of a mainstream class. Similarly, the school psychologist could use a multiple-baseline-across-settings design to evaluate the effectiveness of a social skills training intervention to increase prosocial behavior of one student in five different educational settings.

Figure 7 illustrates the multiple-baseline-across-subjects design. This graph shows the effects of an intervention designed to increase reading comprehension skills of three students with learning disabilities. Reading comprehension was measured through the use of permanent product recording where students first read passages from assigned materials and completed a 10-item worksheet covering the content of the story. With this design, baseline data were collected for all three students. After the behavior of each student had reached a stable level, the intervention procedure was implemented for only one of the students (Lisa) while baseline conditions continued for the other two (Matt and Dan). Once Lisa demonstrated improvement in behavior, the intervention was applied to Matt, while baseline continued for Dan. Finally, when both

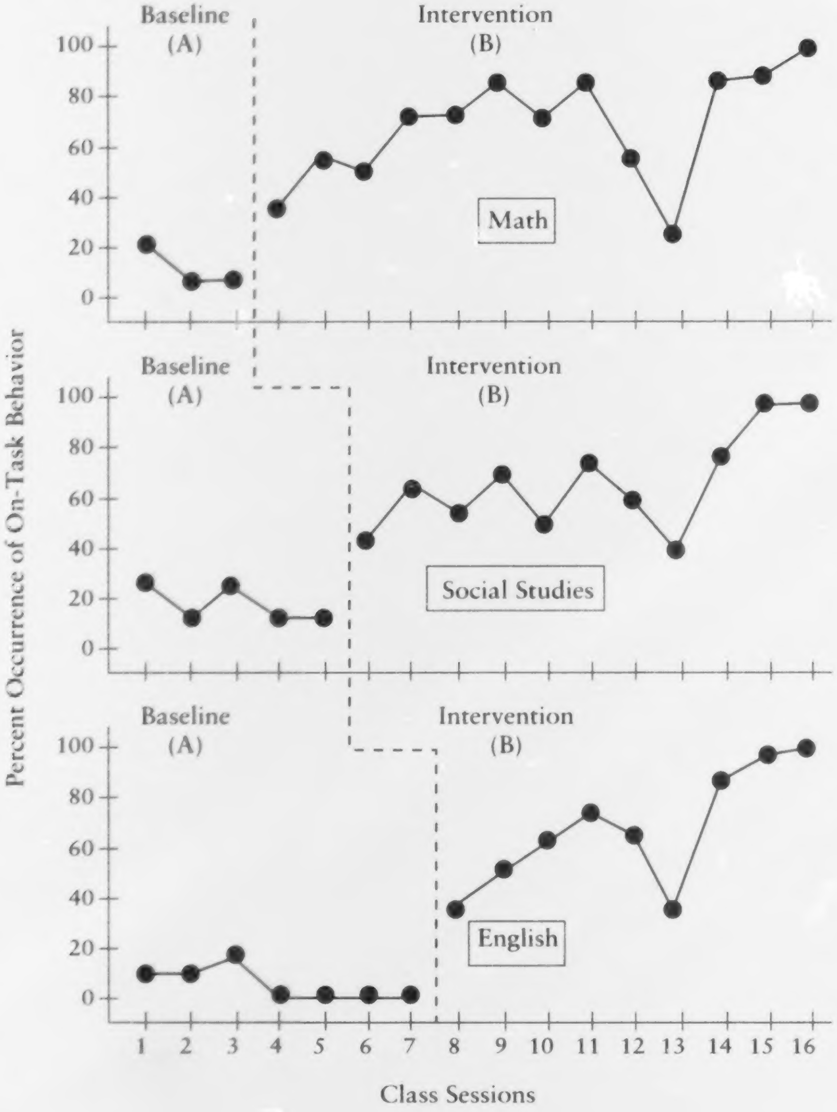
Figure 7. Example of multiple-baseline-across-students design



Lisa and Matt demonstrated behavior change, the intervention was implemented with Dan, resulting in increased reading comprehension skills. This study demonstrated a functional relationship between the intervention and behavioral outcomes by systematically replicating intervention effects across multiple students following stable baselines.

Figure 8 shows an example of a multiple-baseline-across-settings design. In contrast to the previous example that included three students where Matt and Dan served as "controls" for Lisa, and Dan serving as a control for Matt, in this design Arlene serves as her own control. Specifically, in this example the school psychologist collaborated with the team in developing and implementing an intervention designed to increase on-task behavior during three independent seatwork sessions with one student (Arlene). By using a 10-second whole-interval recording procedure, the

Figure 8. Example of multiple-baseline-across-settings design

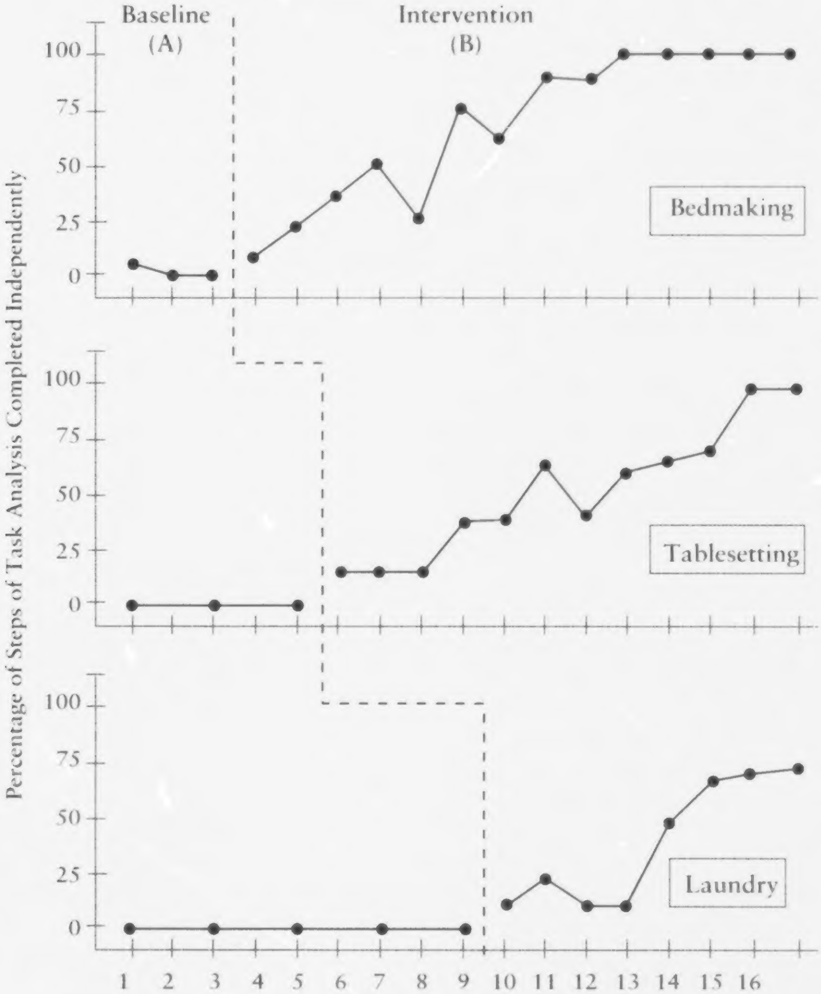


school psychologist observed Arlene during assigned independent seat work activities for three consecutive days. Beginning on the fourth day, the classroom teacher provided in vivo coaching with Arlene in the use of a self-monitoring procedure. Baseline measures of on-task behavior continued in the other two settings. On the fifth day of the project, the classroom teacher again implemented the in vivo coaching of self-monitoring, and Arlene exhibited increased gains in on-task behavior. In contrast, and as a control, Arlene continued to maintain steady rates of lower on-task behavior during the other two settings. On the sixth day, the classroom teacher provided the third session of coaching in self-monitoring with Arlene during math and the first session of coaching in social studies. This resulted in an increase of on-task behavior in both settings. Within the third setting, where Arlene had not been exposed to the intervention, she continued to display steady but low rates of on-task behavior. Beginning with the eighth day, Arlene was coached in the use of the self-control procedures in all classroom settings. This intervention demonstrated that in vivo coaching in self-monitoring techniques resulted in increases in on-task behavior for Arlene across settings.

A variation of the multiple baseline design is the multiple probe design. The multiple probe design involves the same components of multiple baseline designs except that fewer measures of the target behavior are required (Steege & Wacker, 1995). Multiple probe designs are typically used when repeated measures during baseline may be harmful to the student, and/or extended baselines may potentially result in either an increase or decrease in the target behavior(s).

A multiple-probe-across-behavior design is illustrated in Figure 9. This graph shows the effects of an intervention utilizing systematic instruction procedures (i.e., task analysis, prescriptive prompting, and contingent reinforcement) to teach three functional life skills to a student with developmental disabilities. Because of the possible negative impact of extended baseline sessions, the team opted to use a multiple probe design across behaviors. The dependent variable was the percentage of steps of the task analysis the student completes independently for each task. As

Figure 9. Example of multiple-probe-across-tasks design



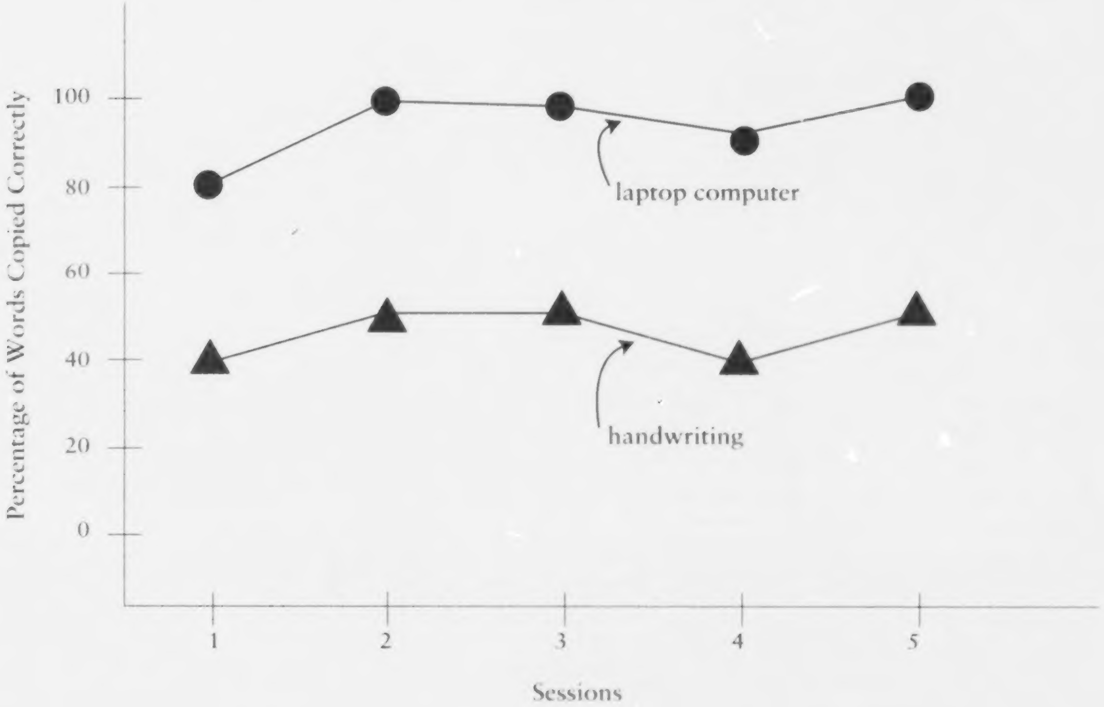
shown in Figure 9, during baseline, Don was asked to complete each of the three tasks and was provided no additional assistance. Baseline data demonstrated that he was able to complete a small percentage of the steps involved in each task. When, and only when, systematic instruction was provided, he displayed a marked improvement in performance. The intervention is staggered across the three behaviors and each behavior changed only after the intervention is applied to that behavior. Because each of the three behaviors changed only after the implementation of the intervention, a functional relationship was demonstrated.

ALTERNATING TREATMENTS DESIGN

Alternating treatments designs are used to assess the relative effectiveness of two or more treatments (i.e., interventions) for a single subject. The alternating treatments design has been referred to by a variety of different terms: multiple schedule design, multi-element design, multi-element manipulation design, and simultaneous treatment design. With an alternating treatments design, two or more treatments are presented to the student in a random or counterbalanced order. Because conditions are presented alternately, there should be no carryover effects with respect to behavior from one treatment trial to the next. This design is especially useful when the educational team is interested in determining which of two or more interventions is more or less effective (Kazdin, 1994). With this design, a comparison can be made between a baseline condition and an intervention between two or more interventions.

Consider the following example of an alternating treatments design. Mary Ann, a student with cerebral palsy and a learning disability in the areas of reading and written language (see Figure 10), experienced extreme difficulties in completing written assignments (e.g., defining vocabulary words, worksheets). During previous school years, Mary Ann had been expected to complete all written assignments using a pen and pencil. While successful during the Kindergarten through third grades, she was experiencing great difficulty in completing written

Figure 10. Example of alternating treatments design



assignments during fourth grade. The school psychologist and special education teacher recommended that Mary Ann be provided with and taught to use a laptop computer to complete written assignments. They hypothesized that by providing her with a laptop computer she would demonstrate an increase in the efficiency, quantity, and quality of written work. Previous recommendations for providing students with laptop computers had been met with resistance by school administration. The special education teacher and school psychologist decided to collect data on the efficacy of their recommendation. They speculated that by demonstrating a functional relationship between the laptop computer and improvements in written language performance, that the team would be very likely to agree with the recommendation for the purchase of a computer for Mary Ann. To test their hypothesis, the school psychologist and special educator used an alternating treatments design to compare the relative effectiveness of the laptop vs. pen/pencil in writing performance.

The school psychologist began the intervention by determining a random assignment in the order of presentation of the two treatments (i.e., laptop versus pen/pencil). Next, the intervention team identified a specific context (e.g., classroom activity) that would be held constant across the presentation of the treatments. They selected a task requiring Mary Ann to copy (or type) the definitions of 10 vocabulary words. Each definition required approximately the same number of words and letters. Ten word lists were identified. Mary Ann was directed to use a pencil to write the definitions for five of the word list and to use a laptop computer to type the definitions for five of the word list. The dependent variable was number of words copied accurately within 10 minutes. The intervention was conducted over 3 days to reduce the potential confounding variable of fatigue. One session was conducted each day, with each session including one trial using the laptop and one trial using pen/pencil. The results of the intervention clearly demonstrated that when compared with handwriting, the word-processor strategy consistently resulted in higher levels of performance. Thus, for this student, the intervention team could prescribe with confidence the laptop computer intervention as a method of increasing written language performance.

CHANGING CRITERION DESIGN

The most basic changing criterion design is an AB design in which performance criteria are set for specified consequences to occur if the target behavior reaches or exceeds the criterion level. The performance criteria shift in a stepwise fashion after stability occurs at each criterion level. For example, a changing-criterion design was used to evaluate the effectiveness of an intervention designed to increase walking/jogging behavior with students with disabilities in an adaptive physical education program. Walking consisted of walking around a 200-meter indoor track at the school athletic complex for 30 minutes each school day. The distance covered within the 30-minute period served as the dependent variable.

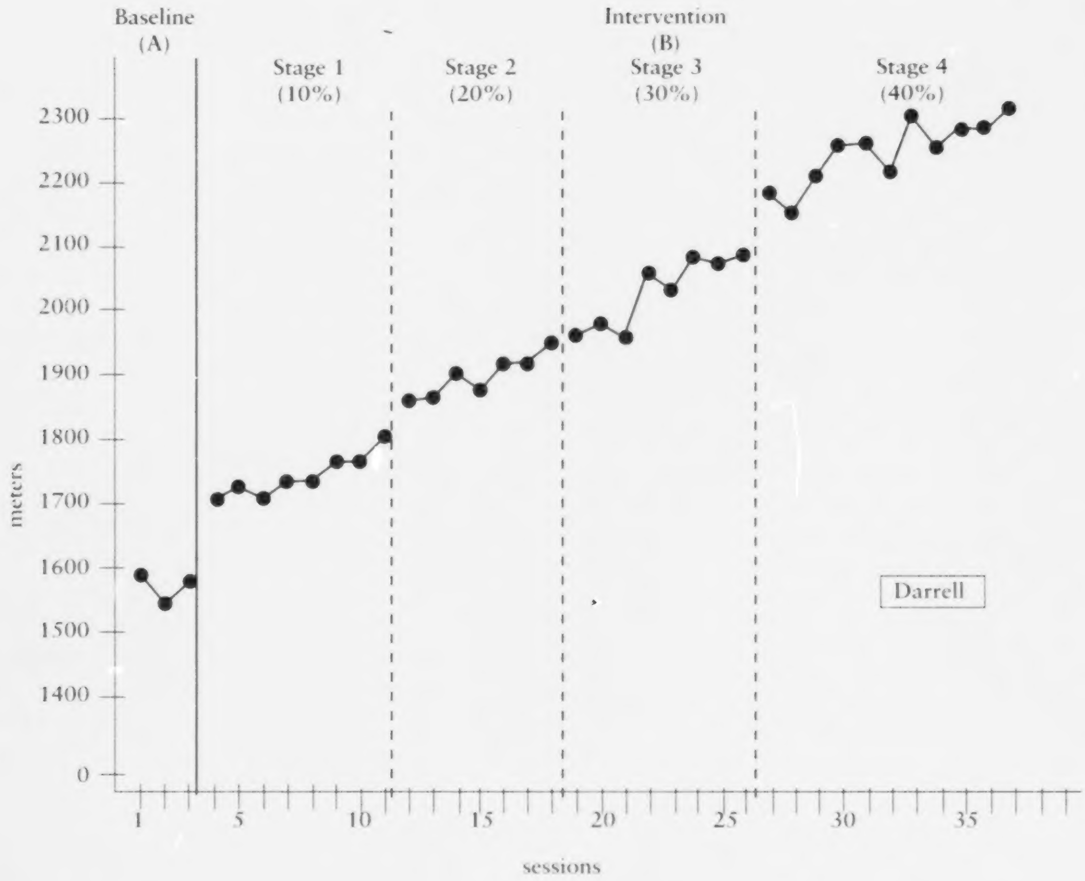
During baseline, each student was told to walk around the track as many times as they liked for a 30-minute period. Following baseline, an intervention package incorporating token reinforcement and self-monitoring components was introduced. Tokens could later be exchanged for gym shorts, running T-shirts, and clothing that depicted school athletic team. Self-monitoring consisted of each student maintaining a walking/jogging log. Criteria for earning reinforcement changed sequentially throughout the intervention. During stage 1, students earned reinforcement when they increased distance walked by 10% over average baseline level of performance for three consecutive sessions (e.g., a student who walked 1,600 meters during baseline needed to walk 1,760 meters to earn reinforcement). Stage 2 required a distance of 20% greater than baseline (1,920 meters), stage 3 required 30% greater than baseline (2,080 meters), and stage 4 required a distance that was 40% farther than the baseline level of performance (2,240 meters).

Figure 11 illustrates the changing-criterion design with one student. During baseline, Darrell walked 1,600 meters or less in 30 minutes. By the eighth session, he was walking 1,800 meters in 30 minutes and had earned the token reinforcement. Beginning with the ninth session, the criterion was increased to 1,920 meters during the 30 minutes. Darrell quickly met the criterion and sequentially continued to meet each criterion shortly after it was introduced.

Collecting Baseline Data

Baseline, also referred to as the "A" phase, is the initial phase of the study when target behaviors are mea-

Figure 11. Example of changing criterion design



sured prior to the implementation of the intervention. Baseline data describe the individual's current level of performance prior to intervention and can be used to predict the levels of future behaviors if no intervention is applied. The baseline measurement of the target behaviors will then be used as the basis for comparison to evaluate the effects of the intervention, comparable to the way in which a non-treatment control condition is used in group designs or how a pretest is used (Fugate & Furlong, 2000).

During the baseline phase, the student's behavior is measured for several sessions until a stable pattern of behavior has been established. Baseline must continue until stability in the behavior is demonstrated. Generally, a stable trend in behavior is determined when the rate of behavior is steady or if it continues in a direction that is the opposite of the expected intervention outcome (e.g., a decreasing trend in rate of adaptive behavior when the intervention is designed to increase adaptive functioning). While minimum of three data points indicating a definitive trend in responding is recommended, the following case examples each illustrate stable trends of behavior during the baseline and intervention phases. Baseline rates can at times be quite variable. In such cases it is important to continue collecting baseline data until a pattern of variability is established, however, there are ethical and practical limitations to extended baselines. For example, withholding an intervention designed to address severe aberrant behaviors until a stable baseline occurs may be problematic. In general, the school psychologist needs to collect at least enough baseline data to demonstrate pre-intervention levels of responding.

Implementing Intervention and Ongoing Collection of Data

Given that the focus of this chapter is evaluating the effectiveness of interventions, procedures for designing and implementing specific interventions are not discussed. It is important that the behaviors targeted for change be measured directly before and during the implementation of the intervention. It is the data concerning a student's specific target behaviors that reveal whether an intervention is effective. Recording target behaviors during the intervention phase allows for continuous evaluation of the effectiveness of the intervention.

Frequent questions asked by practitioners are, How often should we collect data? or How much data do we need to determine the effectiveness of the intervention? There is no simple answer to those questions. Basically, a sufficient amount of data needs to be collected over time to demonstrate a functional relationship between the intervention and target behavior. The number of data points needed to determine the efficacy of an intervention will vary across individuals, target behaviors, interventions, and settings. Thus, it is important to collect enough data during the baseline phase to establish pre-intervention trends. A rough guideline for number of data points for baseline is three similar (i.e., stable) examples of the identified behavior of concern. There must be a sufficient number of samples of the behavior so that a baseline level can be computed and used to compare the rate or level of any subsequent changes once the intervention is implemented. Similarly, the number of intervention data points must be sufficient for a valid comparison of baseline and intervention phase behaviors. This number will depend on the type of behavior; however, a minimum of five data points is recommended.

Once a stable baseline is achieved, the planned intervention is implemented. It is important that the intervention be implemented accurately. The usefulness of the data is enhanced if the intervention is conducted exactly as planned. The team should refrain from modifying the intervention unless the changes are incorporated within the evaluation design. Readers interested in issues of intervention adherence and integrity are referred to Telzrow (1995).

Analyzing Results

Data collected throughout baseline and intervention phases should be displayed in graphic form as shown in the previous examples. Improvement in behavior is determined by examining the differences between baseline trends in responding with intervention trends. Basically, if the target behavior changed in the desired direction during intervention, and potential confounding variables were minimized, then a functional relationship between the intervention and the target behavior has been demonstrated. Even if there is improvement in a target behavior from baseline to intervention, it cannot be concluded necessarily that the change was sufficient (Bloom, Fischer, & Orme, 1995). Interventions are considered to be clinically significant when intervention objectives are attained or surpassed. Readers interested in additional information regarding the analysis of singe case experimental design are referred to sources listed in the annotated bibliography (i.e., Bloom et al. (1995) include several chapters focusing on analysis of data).

SUMMARY

This chapter introduced some of the underlying assumptions and strategies for accurately measuring students' behavior and for systematically evaluating the effectiveness of interventions. Systematic evaluations of interventions document meaningful behavior change and result in improved programming for students. School psychologists increase the accountability for their services by collecting data about student behavior and by demonstrating functional relationships between an intervention and its outcome. This is becoming increasingly important for several reasons. First, the role of school psychologists continues to expand beyond traditional diagnostic assessment to models of consultation, direct interventions, and applied research. Single-case experimental design is the method of choice in evaluating student performance and for documenting the effectiveness of services. Second, federal and state regulations pertaining to special education services require individualized educational programs that include measurable objectives of student performance. Moreover, these regulations require the ongoing measurement of student performance. In other words, teams are required to directly measure a student's progress relative to each behavioral objective. School psychologists are often uniquely trained and qualified to develop reliable and accurate data recording procedures and to assist the team in the design and implementation of methodologies for evaluating intervention effectiveness. Finally, consumers of psychological services are increasingly interested in objective measures of student performance. Students, their families, and the professionals serving them deserve objective analyses that demonstrate that the interventions implemented by the team are responsible for improvements in student behavior. Moreover, such practices enable the team to efficiently identify ineffective interventions. This helps practitioners make modifications in interventions, thereby increasing the efficiency and effectiveness of educational programming. The best practices method of demonstrating the effectiveness of interventions includes direct measures of behavior and single-case experimental designs.

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Bloom, M., Fischer, J., & Orme, J. G. (1995). *Evaluating practice: Guidelines for the accountable professional.* Boston: Allyn & Bacon.

This book is a comprehensive review and explanation of procedures for evaluating interventions. Chapters cover in detail topics such as measuring behaviors, specific evaluation designs, and procedures for analyzing results. Numerous examples are included.

Fugate, M. H., & Furlong, N. E. (2000). Single subject research design. In N. E. Furlong, E. A. Lovelace, & K. Lovelace (Eds.), *Research methods and statistics: An integrated approach.* Fort Worth, TX: Harcourt-Brace.
In this chapter the authors discuss several single case experimental designs and the major issues involved in the interpretation of their results. Clinical examples are infused throughout the chapter as the authors review the key elements in designing, implementing, and critiquing single case research.

Lundervold, D. A., & Belwood, M. F. (2000). The best kept secrets in counseling: Single-case ($N = 1$) experimental designs. *Journal of Counseling & Development, 78,* 92–102.
This article proves a context and rationale for using single-case experimental design procedures as in the evaluation of the effective of counseling services. The authors discuss a seven-component model for establishing the use of single-case experimental design methodology within counseling programs.

Kazdin, A. (1994). *Behavior modification in applied settings.* Pacific Grove, CA: Brooks/Cole.
This book offers two chapters that discuss procedures for (a) identifying, describing, and assessing behavior and (b) implementing and interpreting single case experimented designs. Additionally, numerous examples of single-case experimental designs are discussed throughout the remaining chapters.

Polaha, J. A., & Allen, K. D. (1999). A tutorial for understanding and evaluating single subject methodology. *Proven Practice, 1,*73–77.
This article first describes the essential characteristics of single case experimental designs and then provides examples of four common designs and their application within classroom settings. The article also includes a set of key questions to ask when practitioners critically evaluate single case experimental designs.

36 Best Practices in Reintegration and Special Education Exit Decisions

Kelly A. Powell-Smith
University of South Florida
Patricia L. Ball
Lockland City Schools

OVERVIEW

The way we define or frame a problem, to a large degree, supports or hinders our search for solutions. For example, if an individual's needs are framed around finding the levels of support needed to progress toward specified goals, our search should result in the generation of intervention ideas. Within a problem-solving paradigm, the focus of the special education (SE) identification process is defining the accommodations and modifications that will help a child succeed in the educational environment. Identifying and measuring a student-centered deficit or the magnitude of a discrepancy in achievement or behavior becomes somewhat less important. Rather, measuring an intervention's effectiveness through progress monitoring and data collection becomes the focus of our efforts.

Special education was intended to be a "problem-solving system" for general education (Deno, 1989). School psychologists now have the measurement technology that links assessment of individual needs to interventions. A current research base exists for choosing effective instructional practices and interventions. Methods to monitor students' academic and behavioral progress relative to general education (GE) expectations also are available. Thus, it is incumbent upon school psychologists to use the available knowledge base to assist educators in implementing effective instructional programs that include plans for returning SE students to GE environments. The purpose of this chapter is to outline a set of best practices to assist school psychologists and other educational professionals in meeting this goal.

Reintegration Defined

Reintegration involves determining when it is appropriate to fade and eventually remove SE services for a student. For the purposes of this chapter, reintegration will be described as the process that occurs on a trial basis prior to a more permanent removal of SE services. This process is tied to a specific set of data-based, decision-making steps. Reintegration is not an all or nothing judgment about a student's need for SE, but is best viewed along a continuum. Thus, reintegration may be considered for a single domain (e.g., reading) or for several domains of functioning (e.g., reading, science, physical education). The process also is not restricted to students receiving SE services for academic difficulties. Reintegration may be appropriate for students receiving services for behavioral and emotional difficulties, communication and language problems, physical disabilities, and so on. Thus, the process is appropriate to consider for any student receiving SE services.

Terms most often associated with reintegration, but that may carry different meanings, include "mainstreaming" and "inclusion." Mainstreaming often refers to placing students who receive SE services into environments with non-disabled peers for the purposes of receiving instruction in a less restrictive setting or for social/emotional benefits to the SE student. Students who are referred to as "mainstreamed" typically are not involved in a systematic process geared toward eventual exit from SE. Rather, their mainstream placement is part of their Individual Education Plan (IEP) with goal monitoring by the SE teacher(s). Research on mainstreaming has focused more on the effects for SE students already in GE. In contrast to mainstreaming research, reintegration studies usually have focused on the process by which students return to GE for instruction (Fuchs, Roberts, Fuchs, & Bowers, 1996).

Reintegration also carries a different meaning than the term "inclusion." Often used with the descriptor "full," inclusion refers to instructing all students receiving SE services, regardless of disability category, with non-disabled peers. Inclusion generally is not a process geared toward eventual exit of the SE student, but rather attempts to reduce the segregation of students with disabilities regardless of the degree or severity of disability. Thus, inclusion decisions tend to be large-scale, values-based decisions.

Background Information and History

Considering reintegration is important for a variety of reasons including economic concerns, socio-political issues, and legal parameters. A primary economic concern is the continued exponential growth of SE and the expenses associated with this growth. According to the twenty-second Annual Report to Congress on the implementation of the Individuals with Disabilities Education Act (IDEA) (U.S. Department of Education, 2000), 5.5 million students were served in SE or 12% of all children enrolled in public schools in 1998–1999. Of the children served in SE, more than 78% (or 4.7 million) were identified as those with mild disabilities (e.g., specific learning disabled (50%), speech and language impaired (20%), and emotionally disturbed (8%)). The overall number of children in SE represents an increase of 2.7% over the previous year and a 30.3% increase over the past decade. The costs associated with this growth are enormous. In fiscal year 2000, more than $4.9 billion was appropriated for Part B of IDEA, Section 611. Estimates of current total dollars spent on these services range from $30.9 to $34.8 billion per year with the average per pupil spending estimated at $5,435 (Parrish, 1999). To complicate matters, many students identified with mild disabilities never exit SE despite being the most likely candidates for reintegration. Available data suggest that as few as 2–6% exit each year (Lytle & Penn, 1986; Shinn, 1986).

Reintegration is tied historically to the Regular Education Initiative (REI). The REI achieved prominence in the late 1980s after Assistant Secretary of Education Madeline Will issued a white paper on the REI (Will, 1986). The message of the white paper was clear: too many SE students were receiving services outside of their GE classes. The paper called for more collaboration between special and general educators and greater efforts to educate SE students in GE. Since that time, increased attention to outcomes and accountability for SE students relative to the GE curriculum has been incorporated in the Individuals with Disabilities Education Act (1997).

Both historical and current legal parameters affect reintegration decision making. From a historical perspective, the Least Restrictive Environment (LRE) clause of IDEA indicates clearly that students should be educated in the GE environment to the *maximum extent appropriate*. Specifically, the clause states:

> ...to the maximum extent appropriate, children with disabilities, including children in public or private institutions or other care facilities, are educated with children who are not disabled, and special classes, separate schooling, or other removal of children with disabilities from the regular educational environment occurs only when the nature and severity of the disability of the child is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily. (Section 612, (a)(5)(A) IDEA, 1997).

This clause has been present since the inception of the Education of the Handicapped Act (EHA), with relatively minor changes in wording since that time. The one noticeable change is the addition of the words "special classes." Central to reintegration are the LRE concepts of "benefit" and "satisfactory achievement." These concepts were operationalized by the United States Supreme Court in *Hendrick Hudson District Board of Education v. Rowley* (1982). Benefit was defined as satisfactory achievement in GE. Satisfactory achievement was defined by the grading and achievement standards within the mainstream GE setting. Finally, recent changes in IDEA have reinforced greater attention to SE students' access to GE (Section 601 (c)(5)(A), IDEA) as well as measuring goals and objectives with the same frequency as GE (Section 614 (d)(1)(A)(vii)(II), IDEA).

Despite its clear importance, barriers to reintegration exist. First, SE typically has operated within a traditional deficit-centered model in which problems (disabilities) are viewed as relatively intractable or organic in nature. Framing problems in this manner reduces the likelihood that one would expect the student to exit SE. Another concern with this model includes the measures used for decision making. These measures often are focused on identification of student deficits and generally are not designed to contribute significantly to the development of effective interventions (Deno, 1986; Gresham & Witt, 1997; Marston, 1989; Shapiro, 1996a). The tools used to identify and re-evaluate students for SE often are not related closely to the GE curriculum or local GE standards. Instead, the measures often used are nationally normed achievement tests tied to globally derived national achievement standards. While useful for comparing students to a national standard, the tests may have little overlap with the local curriculum, often have few items at any particular grade level, and are not designed for sensitivity to individual student progress (Marston, 1989). Thus, such measures do a poor job of determining whether a student can meet the grading and achievement expectations in their local GE environment.

Another barrier occurs when parents and teachers are unwilling to return students receiving SE services to the GE environment (Fuchs, Fuchs, & Fernstrom, 1992; Shinn, Baker, Habedank, & Good; 1993; Weintraub, 1991). For the most part, reintegration decision making has relied heavily upon the volunteerism or "goodwill" (Fuchs et al., 1992) of teachers and parents. That is, all parties involved must be "willing" to participate in and agree to the decision to return a student to the GE classroom. If any of the individuals disagrees with a change in placement, the likelihood of the student being reintegrated is reduced greatly. The attitudes of parents and teachers regarding reintegration may reflect naiveté regarding the purpose of SE as a *supplement to* rather than a replacement for GE. Parents of students identified through traditional models of practice may view reintegration efforts as a reduction of SE services that are necessary to "maximize" their child's educational potential (Green & Shinn, 1994). In this era of high stakes testing and use of test scores for accountability, teachers may be concerned about the reintegrated student no longer receiving test accommodations that typically would be part of their IEP. Thus, unwillingness of parents and teachers may reflect anxiety about the impact of reintegration.

Special education teachers may be concerned about how their students will perform once reintegrated. General education teachers also may be reluctant to have SE students returned to their classes. Teachers may underestimate the academic and behavioral skill levels and progress of students receiving SE services. These concerns about reintegration can be remedied. For example, research (e.g., Rodden-Nord, Shinn, & Good, 1992; Shinn et al., 1993) suggests that teachers become more willing to reintegrate SE students when they are given data indicating that the student performs within the grading and achievement expectations of their GE classrooms. However, parents' willingness to reintegrate their child may be more dependent upon subjective factors rather than student performance data. For example, parents may rely heavily on SE teachers to interpret results and to make recommendations for reintegration (Ball, 1997; Green & Shinn, 1994).

Within a problem-solving model of practice, the collaboration between GE and SE teachers and parents from the onset of the process helps reduce misconceptions about the purposes of special education. School psychologists need to give due consideration to the concerns of parents, teachers, and other educational personnel so they can support reintegration decisions more adequately. Further, school psychologists need to be involved in staff-development efforts aimed at increasing skills related to reintegration success, and in making decisions about GE class placement on a more regular basis.

When Reintegration Should Be Considered

School psychologists should consider reintegration and possible exit from SE as a natural part of SE service provision. When the concerns that resulted in these services no longer warrant them, then reintegration is appropriate. For example, if a student's skills or behavior fall within the range acceptable in GE, then that student may no longer *need* SE services and reintegration should be considered. The question becomes, then, how does one know that skills and behaviors fall within an acceptable range?

BASIC CONSIDERATIONS

To make reintegration a reality, school psychologists need to have an understanding of the principles or values upon which the best practices described in this chapter are founded. These foundational principles are not connected to a specific technology or technologies. Thus, as technology improves or changes, these principles serve as a means of judging whether new technology serves the same purpose (Grimes & Tilly, 1996; Tilly & Grimes, 1998; Tilly, this volume). These guiding principles are as follows: (a) hypothesis testing, (b) formative evaluation/ongoing progress monitoring, (c) consideration of the classroom and school ecology, (d) case-by-case decision making, and (e) consideration of legal parameters.

Hypothesis Testing

Hypothesis testing is an integral part of the problem-solving process. One cannot know a priori that an intervention will be successful for an individual child (Campbell, 1988; Deno, 1986, 1989). School psychologists must recommend interventions, ensure they are implemented with integrity, and measure their effectiveness. In this way, interventions are considered hypotheses to be tested. The same notion applies to reintegration. Previous research (e.g., Shinn, Powell-Smith, Good, & Baker, 1997) suggests that reintegration trials be treated as hypotheses to be tested. Some students have responded well to reintegration while others with similar problems did not. The variables that determined the success or failure of reintegration were not apparent beforehand. Without collecting data during the reintegration trial period, the success of reintegration would have been ambiguous. Therefore, it is clear that hypothesis testing is tied closely to the process of formative evaluation and ongoing progress monitoring.

Formative Evaluation/Ongoing Progress Monitoring

Formative evaluation has two primary characteristics. The first of these characteristics is consistent with the rationale for hypothesis testing; that is, our interventions must be tested to determine their effectiveness. Second, formative evaluation involves examining student performance over time on a frequent and routine basis (Witt, Elliott, Daly, Gresham, & Kramer, 1998). "The emphasis in formative evaluation is on responsive, data-based problem-solving rather than on static diagnosis and prescription" (Deno, 1990, p. 169). This second characteristic suggests that data are collected for the purposes of making decisions about student performance and adjusting programs in a timely fashion. Thus, the purpose of formative evaluation is in direct contrast to the notion of diagnosing a problem for which one can then prescribe a specific treatment with a known outcome.

With regard to reintegration, formative evaluation is particularly important. Studies on reintegration efforts thus far (e.g., Shinn et al., 1997) suggest that the success of reintegration trials could not be predicted with 100% accuracy based upon data gathered prior to reintegration. Thus, ongoing monitoring of student performance is necessary once reintegration occurs to ensure success and modify services as needed.

Consideration of Classroom and School Ecology

Part of a problem-solving orientation is the consideration of variables that influence educational outcomes beyond those that are child-centered. A student's academic performance depends on multiple variables other than just student academic skill. School psychologists should be well versed in assessing components of instructional environments that facilitate or impede student learning or behavioral progress (Ysseldyke et al., 1997). Environmental factors such as "the nature and quality of teacher-student interactions, curricula, and materials also affect academic outcomes" (Fuchs, Fernstrom, Scott, Fuchs, & Vandermeer, 1994, p. 11). Classroom organizational structure and the diversity of students present also contribute to classroom and school ecology (Walker & Bullis, 1990). According to Witt et al. (1998), two fundamental assumptions of assessment are (a) that "individual differences among children derive their meaning from the situation in which they occur" (p. 7) and (b) "good assessment involves gathering information about the environment in which the student is functioning" (p. 12). Logically then, consideration of classroom and school ecology is an important part of any problem-solving process including reintegration.

Case-by-Case Decision Making

The notion of case-by-case decision making is associated with the *Responsible Reintegration* model delineated by Douglas Fuchs (Fuchs et al., 1992). This model specifies that students be considered for reintegration on an individual basis according to their unique skills and needs. Furthermore, such an approach dictates that the outcomes of reintegration be monitored to determine the effects, both short-and long-term, for the individual student. Thus single-case, rather than group analyses, are most appropriate for evaluating reintegration decisions. Case-by-case decision making also is in direct contrast to large-scale decisions, in which groups of students are reintegrated (i.e., all students with mild disabilities). As noted by Fuchs et al., a case-by-case approach is consistent with procedures set forth in federal law (e.g., IDEA) and, more importantly, with the recent legal parameters noted in the next section of this chapter.

Considering Legal Parameters

In a problem-solving system, a problem is defined by a discrepancy between what is expected and what is occurring (Deno, 1989; Shinn, 1995). Professional judgment helps determine the standard against which student performance is judged to be problematic (Tilly, this volume). However, when it comes to reintegration and exit decisions, the U.S. Supreme Court has determined the performance standard against which a student's appropriateness for GE is judged. If a student can perform within the grading and achievement standards for GE, then that student should be educated in that environment (*Hendrick Hudson District Board of Education v. Rowley*, 1982).

Several court cases have examined this issue. Specifically, three standards for determining LRE have been yielded from recent circuit court decisions. The 3rd, 5th, and 11th circuits have adopted the Daniel R.R. test. This test determines if education in the GE classroom with the use of supplemental aids and services can be achieved satisfactorily and if the school has mainstreamed the child to the maximum extent appropriate. The following four issues are examined: (a) the steps a school has taken to accommodate the child in the GE classroom, (b) the educational benefit the child will receive from placement in the GE environment, (c) the child's overall educational experience in GE, and (d) the effect that the presence of the child with the disability has on the peers in the GE classroom (*Daniel R.R. v. State Board of Education*, 1989). Decisions in the Greer and Oberti cases in the 11th and 3rd circuit courts modified the Daniel R. R. test to allow a comparison of the benefits of GE versus SE (*Greer v. Rome City School District*, 1991; *Oberti v. Board of Education of Clementon School District*, 1993).

As another example, the 4th, 6th, and 8th Circuits have adopted the Ronker Test (*Ronker v. Walter*, 1983). For this test, the courts ask whether services in a segregated setting can be provided feasibly in a non-segregated setting and consider the following: (a) the benefits the child receives from an SE class compared to those in GE, (b) whether a child with a disability would be disruptive in the GE class, and (c) the cost of maintaining the child in GE. Finally, the 9th Circuit has used a test that applies both the Daniel RR and Ronker tests. For this test the court considers: (a) the educational benefits of full-time placement in a GE class, (b) the non-academic benefits of such a placement, (c) the effect the student has on the teacher and children in the GE class, and (d) the costs of mainstreaming the student (*Sacramento Unified School District v. Rachel H.*, 14 F.3rd 1398, 1404, 1994).

In addition to being knowledgeable of recent LRE court decisions, school psychologists must understand clearly that IDEA and recent case law do not support *maximizing* the potential of each child with a disability. Rather, the judgment in the Rowley case clearly states that education must provide services "sufficient to confer some educational benefit upon the handicapped child" (*Hendrick Hudson District Board of Education v. Rowley* p. 200). However, "the furnishing of every special service necessary to maximize each handicapped child's potential" (p.199) is not required by IDEA. Consistent with Rowley, the 4th circuit, in its opinion in *Hartmann v. Loudoun County Board of Education* (1997), indicated that IDEA does not guarantee every child with a disability the ideal educational opportunity. School psychologists must be facile with these rulings because they may be unfamiliar to key people (e.g., parents and teachers) involved in reintegration decision making.

A misunderstanding of the purpose of SE also may exist. The purpose of SE is to provide a *free appropriate public education* (FAPE), not to maximize a child's potential. A lack of understanding of "sufficient" versus "maximum" educational benefit may cause concern when considering reintegrating a student into the low achieving group of GE peers. People may fear this standard is too low, despite the fact that it is acceptable within the grading and achievement expectations in GE. Importantly, this standard should not be construed as reinforcing lowered expectations for children with disabilities. However, to withhold the opportunity for instruction in GE because the child does not meet at least average expectations may prevent further acceleration of their skills and limit their future opportunities.

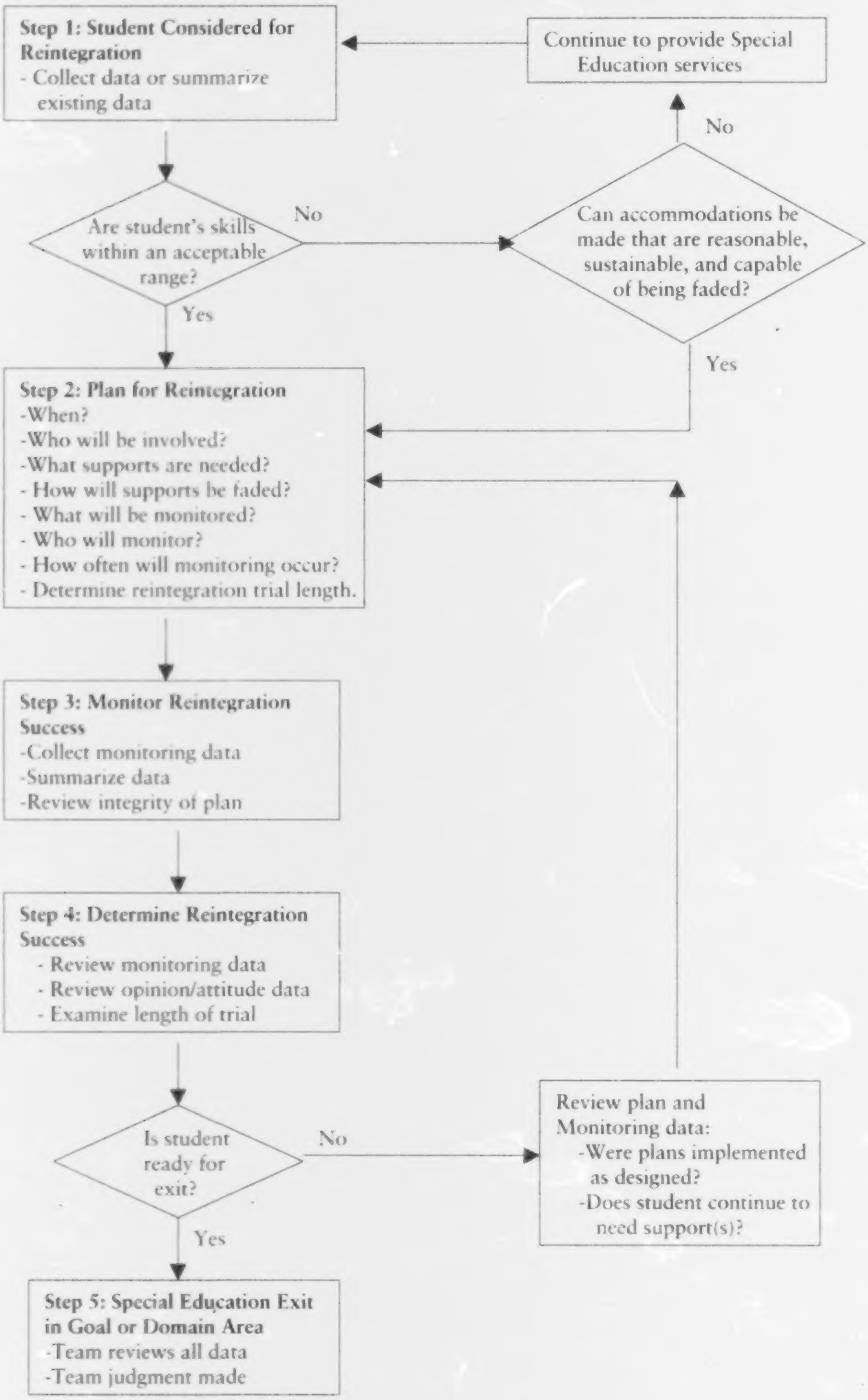
BEST PRACTICES

Within a problem-solving model of practice, students are identified for SE services because of a mismatch or a discrepancy between their current performance and what is expected of them (Deno, 1989; Shinn,1995). *Problem identification* begins with data-collection activities that focus on functionally relevant behaviors of concern (e.g., fluency in reading decoding, accuracy of math computation, level of academic engagement, frequency of behavioral outbursts). The purpose of problem identification is to measure and define the significance of a discrepancy. The data collected help substantiate the significance of the discrepancy and contribute to the diagnosis of the problem (*problem analysis*). Hypotheses generated from the assessment data and from problem analysis lead to the selection and implementation of interventions that have the highest probability of reducing the discrepancy between the target student's performance and GE expectations. Goals and interventions needed for the student to achieve satisfactorily compared to the typical students' performances are discussed (i.e., *intervention planning and goal setting*). *Progress monitoring* of the student's achievement occurs over an agreed upon period of time. Finally, intervention effectiveness is evaluated at the end of the progress-monitoring period (i.e., *program evaluation*) by collecting data to determine whether a significant discrepancy still exists.

In a problem-solving model, reintegration decisions flow naturally from the activities involved in progress monitoring and program evaluation. Best practices in reintegration and exit decisions within a problem-solving model incorporate provisions for exit that are discussed at the time of initial identification. At that time, outcomes for the student are discussed with an eye toward eventual reintegration and exit. For example, the skills and behaviors needed to be successful in the GE environment are discussed. As teams meet to develop an IEP and more long-range plans (5 years or more), they would conduct their planning with the notion that reintegration, whether in a single domain or across all domains, is a potential goal. Relevant areas to consider might include: cognition; achievement; social, behavioral, and emotional adjustment; communication and language; sensory status; motor skills; and health status. Consistent with the problem-solving process, at each checkpoint the student's progress relative to reintegration and exit is discussed, whether it is at the end of the grading period, annual review, 3-year review, or during transition planning. Reintegration and exit may not be a realistic or appropriate goal in all domains for all students receiving SE services. However, reintegration should be discussed at the time of identification if there is to be any chance of it occurring in a systematic manner.

The reintegration and exit processes outlined in this chapter follow a series of steps consistent with a problem-solving model. These steps also are consistent with the foundational principles outlined at the beginning of this chapter. Specific questions and activities are delineated at each step of the process (see Figure 1). Step 1 begins the process with the student being considered for reintegration, followed by planning for reintegration (Step 2), monitoring reintegration success (Step 3), determining reintegration success (Step 4), and exiting SE in the goal or domain area (Step 5). Any person involved in the student's education (parent, GE teacher, SE teacher, principal, counselor, and/or school psychologist) could prompt a closer look at reintegration at any time. Most typically, the timing of these decisions would be at the natural decision-making points for student evaluation (e.g., interim reporting, quarterly grading periods, annual review).

Figure 1. Reintegration and exit process, specific steps, and activities for each step


Step 1: Student Considered for Reintegration
- Collect data or summarize existing data
Continue to provide Special Education services
No
Are student's skills within an acceptable range?
No
Can accommodations be made that are reasonable, sustainable, and capable of being faded?
Yes
Yes
Step 2: Plan for Reintegration
-When?
-Who will be involved?
-What supports are needed?
- How will supports be faded?
- What will be monitored?
- Who will monitor?
- How often will monitoring occur?
- Determine reintegration trial length.
Step 3: Monitor Reintegration Success
-Collect monitoring data
-Summarize data
-Review integrity of plan
Step 4: Determine Reintegration Success
- Review monitoring data
- Review opinion/attitude data
- Examine length of trial
Is student ready for exit?
No
Review plan and Monitoring data:
-Were plans implemented as designed?
-Does student continue to need support(s)?
Yes
Step 5: Special Education Exit in Goal or Domain Area
-Team reviews all data
-Team judgment made

Step 1: Student Considered for Reintegration

In systems not currently operating within a problem-solving paradigm, reintegration decisions continue to be necessary and feasible. However, within these systems, reintegration and exit issues are more challenging. Data collected for eligibility and placement decisions typically do not link to goals and effective interventions. Eligibility test data are primarily administrative and procedural in purpose rather than functional and diagnostic. "Attempting to 'link' administrative assessment strategies to the development and evaluation of interventions is problematic" (Batsche & Knoff, 1995, p. 570). Thus, additional data similar to those collected within a problem-solving model must be obtained to facilitate reintegration and exit decision making. The relevant questions continue to be whether the target student is making adequate progress in comparison to GE peers and whether there has been a significant decrease in the discrepancy that resulted in SE service provision. Answering these questions requires obtaining samples of the academic and/or behavioral skills of the identified student and of the comparison students within the receiving GE classroom.

ACADEMIC SKILL DOMAINS

When considering academic skill domains, examining the performance data of the target student and the typical GE peers may be multifaceted. First, we could access existing achievement data typically collected by schools or districts. Second, we could sample directly the academic skills of the target student and comparison peers in the receiving reintegration classroom. Finally, we could interview the receiving GE and SE teachers and observe in the environment of interest to determine which academic survival skills are needed within the reintegration environment.

Schools often assess student achievement and compile the results using multiple methods. These data can be examined for performance trends between districts, buildings, and classrooms. For example, assessments may include state proficiency tests, standardized achievement tests, competency-based evaluations, portfolios, performance-based projects, Curriculum-Based Measures (CBM) (Deno, 1985; Shinn, 1989), and Dynamic Indicators of Basic Early Literacy Skills (DIBELS) (Kaminski & Good, 1996, 1998). Standardized proficiency and achievement tests are less direct measures of the behaviors of concern in the classroom. However, the information obtained may help to define performance discrepancies. The definition of average or below average achievement is a local district decision. For example, some districts may consider students performing below the 25th percentile to be at risk for academic failure. Other districts may recognize the 16th or 10th percentile ranks as the cut off for defining children who are in need of additional resources. Conversely, a district may consider students to have average skills if their reading and math scores on a standardized achievement test range from the 16th to the 84th percentiles. Some district personnel may discuss these issues in terms of the degree to which students meet grade level expectations. For other districts, no formal definition may exist.

Once a school psychologist determines the district's definition of average, low average, and below average achievement, it is possible to analyze data from various achievement results by grade level or by classroom. Comparisons of the target student's performance to that of typical peers may indicate a significant discrepancy on various achievement measures that are collected school or district-wide each year. A more direct and functional assessment of basic academic skills would include CBM or DIBELS collected at the individual classroom, building, or district level. CBM of reading, math, spelling, or written language and DIBELS measures provide excellent comparison data and when normed at the district or building level may include percentile ranks or median scores by grade level or by classroom.

In addition to reviewing existing data, direct assessment of the target student's academic skills in comparison to students in the receiving reintegration classroom will be necessary. The dimensions of comparison are determined by the behavior(s) of concern and the instances in which the target student will be required to use the skill. For example, many students receiving SE services have reading skill deficits that affect numerous areas of performance in the classroom. A comprehensive assessment for a student considered for reintegration would include basic reading fluency and comprehension of the GE language arts curriculum. However, because reading ability effects numerous other academic tasks, it is necessary to assess the student's application of reading to successfully complete in-class assignments and homework, as well as other academic course work (e.g., math, science, social studies).

In all instances, the performance of the target student is compared to the expectations in the reintegration environment, defined by the performance of GE peers. Collecting local classroom-norms offers a viable method by which to obtain this comparison. A classroom norm is obtained by asking the receiving teacher to nominate five to seven students who perform at the lowest acceptable level in the GE classroom. Next, the students nominated for the micro-norm and the target student are assessed across academic behaviors of interest, using the same measurement tools. For example, several previous studies have demonstrated the utility of using CBM for these purposes (see Powell-Smith & Stewart, 1998, for details). The median or average results of the typical students' academic performance on any given academic behavior provide the micro-norms to which the target student's performance is compared. The overall task is to determine if the target student is performing academically within the range of students in GE. If the student considered for reintegration is successful on tasks performed within lowest acceptable performing instructional group, then that instructional setting may represent the LRE for the student. If the target student continues to demonstrate a discrepancy in performance, consideration should be given to the accommodations and supports in the reintegration classroom that would allow the student to be successful. If the student exhibits discrepancies that are so significant that accommodations and supports would be beyond what GE could provide, then reintegration may not be an option.

Beyond examination of the target student's specific academic skill development, other considerations may include the academic survival skills necessary to be successful in the reintegration environment (e.g., academic-engaged time, organizational skills, self-management strategies, and study- and test-taking skills). Information about academic survival skills may be obtained by observing the behaviors of the local normative group and the target student. This task may be difficult if the student considered for reintegration receives services in an SE pull-out program. However, even within a smaller teacher/student ratio, these behaviors would be present and observable. It also is possible to have a trial reintegration period with the intent of collecting data in the most natural environment possible.

Finally, teacher interviews may be conducted to obtain information about the target student's skills as well as the expectations in the reintegration environment. The SE teacher will have valuable information about the student's specific academic skills, rates of attention and academic engagement, work completion and accuracy rates, and self-management strategies (i.e., academic task-related behaviors). An interview with the GE teacher would provide information about the academic task-related behaviors expected in the GE environment. School psychologists may have formal or informal interview methods by which to gather this information. The interview should focus on the teacher's expectations for academic task-related behaviors from students throughout each instructional period and during alterations in the schedule and daily routines (e.g., substitute teachers, assemblies, guest speakers). School psychologists may choose to review the literature and programs available to organize and structure a teacher interview (e.g., Kame'enui & Darch, 1995; Paine, Radicchi, Rossellini, Deutchman, & Darch,1983; Sprick, Garrison, & Howard, 1998). The interview could, in turn, assist school psychologists and teachers in designing classrooms that help students meet the expectations in a variety of environments. Teachers who clarify their expectations for student success during the instructional day may have better-managed classrooms. In turn, a well-managed classroom may be the most appropriate reintegration setting for a student, depending on the reasons for SE placement.

BEHAVIORAL AND OTHER CONCERNS

The questions to consider in making reintegration decisions for students receiving SE services for behavioral, social-emotional, communication, and other concerns, are similar to those for a student receiving SE services for academic concerns. The standard for when to consider reintegration remains the same; reintegration should be considered when the student can meet not only the grading and achievement expectations for GE, but also the behavioral and social-emotional requirements to be successful in the GE environment. The goal is to determine what the grading and achievement expectations are with respect to behavior and social-emotional functioning for the GE environment.

Several variables might be examined to determine if the student meets GE environmental expectations for behavior and social-emotional functioning. These variables include those that are student focused such as coping strategies, teacher pleasing behaviors (e.g., follows directions, accepts consequences, listens), self-help and problem-solving skills (e.g., works independently, makes need for assistance known, controls anger), and positive peer interactions (e.g., cooperates with others). Other variables include those that are more teacher focused, such as tolerance for student misbehavior, teacher attention, motivational procedures, classroom management practices. Finally, specific classroom environment variables to consider include: (a) classroom organization and routines, (b) instructional arrangements, (c) classroom physical arrangement, (d) number and length of transitions, and (e) the involvement of others (e.g., paraprofessionals, support specialists) in the classroom.

Obtaining information about the normative expectations for student behavior is accomplished best through direct observation techniques. School psychologists can choose from a number of published behavioral observation codes such as the Code for Instructional Structure and Student Academic Response (CISSAR; Stanley & Greenwood, 1981), the State Event Classroom Observation System (SECOS; Saudargas, 1992), and the Behavioral Observation of Students in Schools (B.O.S.S.; Shapiro, 1996b). School psychologists also could develop their own behavior observation code. Should school psychologists choose to develop their own code, they may want to consult published resources (e.g., Alessi & Kaye, 1983; Cooper, Heron, & Heward, 1987; Hintze, this volume) for ideas about how to develop useful and reliable protocols to document students' behavior within various instructional environments.

To determine what the normative expectations are for the receiving GE environment, the school psychologist would observe students in the classroom (or classrooms) that represent the lowest *acceptable* standard for behavioral and social-emotional functioning. The school psychologist should consult with the teacher(s) in those classrooms to determine who these students are. In keeping with the lowest *acceptable* level as the standard, students chosen for observation should not be ones considered at-risk for referral for behavioral or social-emotional concerns. Neither should they be students considered model classroom citizens. Multiple observations using the same instruments for both target student and comparison peers should occur in the receiving classroom(s). Ideally, observations should be made across several days and times to see the range of the student behaviors and to increase the reliability and accuracy of the information. Observations should occur during structured academic periods (e.g., reading, math, science) and during less structured academic periods (e.g., art, P.E., music). Direct observations also should be conducted while students are in hallways, on the playground, and in the cafeteria where many student misbehaviors occur. Information on the range of behaviors acceptable within the school at large will help to successfully reintegrate students who have difficulties with self-managing behavior. From these observations, local micro-norms for behavior can be developed (see Alessi & Kaye, 1983; Canter, this volume). Once these micro-norms are developed, the data collected on the target student's behavior across a variety of settings can be compared to those norms to determine if his/her behavior falls within an acceptable range. A concern with this process is that the reintegration candidate may not be observed in the exact same settings and under the same conditions as the GE comparison group. However, these data will provide some basis for comparison. When combined with other data, these data should contribute significantly to reintegration decision making. Notably, similar procedures can be used for examining reintegration for students with concerns in other domains (e.g., communication/language).

Another important task for determining a student's appropriateness for reintegration is obtaining information about GE teacher expectations and classroom environmental variables. Direct observation and teacher interview are the two best methods for examining these variables. School psychologists could use narrative direct observations to examine the natural flow of classroom events as well as how transitions are managed. During observations, school psychologists can observe classroom management techniques such as posted rules and schedules, reinforcement and feedback for rule-following, length of transition times, management of mild disruptive behaviors, etc. Again, published observation codes can be used to examine these variables such as the Classroom Ecological Inventory (CEI) Classroom Observation (Fuchs et al., 1994), the Instructional Environment Scales (TIES) (Ysseldyke & Christenson, 1987), the CISSAR, and the SECOS. Alternatively, school psychologists may choose to develop their own observation code.

Teacher interviews can be used by school psychologists to obtain information about classroom environment, teachers' motivational strategies, classroom rules, allocation of instructional time, as well as information about teacher tolerance for mild disruptive behavior. School psychologists could use questions from published interview formats such as: (a) CEI Teacher Interview (Fuchs et al., 1994), (b) the TIES, (c) the Teacher Interview Form for Academic Problems (Shapiro, 1996a), and (d) the Instructional Planning Form Interview (Powell-Smith & Stewart, 1998). School psychologists also can create their own set of interview questions based upon review of the literature on programs that emphasize proactive classroom management and instructional techniques (see Kame'enui & Darch, 1995; Paine et al., 1983; Sprick et al., 1998). School psychologists also can take advantage of published resources regarding interviewing procedures in general (e.g., Bergan & Kratochwill, 1990; Lentz & Wehmann, 1995). Again, the purpose of observations and interviews is to determine the discrepancy between the potential receiving GE classroom and the SE classroom. The degree of discrepancy along with the student behavioral observation data serves as the basis for making reintegration decisions. Ultimately, the team of individuals responsible for reintegration decisions will need to determine the behaviors and skills to be examined for the individual student's reintegration to be successful. Resources related to assessment and progress monitoring of student performance are provided in the reference and annotated bibliography section of this chapter and in Tilly (this volume).

Once Step 1 of the process is completed, possible decision outcomes include the following: (a) reintegrate and monitor; (b) reintegrate and provide training, support, and monitoring; or (c) wait on reintegration until the match between the student's skills and the demands of the environment are aligned more closely. Both outcome (a) and outcome (b) would occur at Steps 2 and 3 of the reintegration and exit process. As evident by outcome (c) the activities involved in this process will cause special education and student services personnel (e.g., school psychologists) to examine more closely the kinds of training and supports necessary to achieve reintegration. These supports might include: working with GE teachers to increase their classroom management skills, working with SE teachers to incorporate more of the elements found in the GE classroom into the SE classroom (i.e., training for generalization), and/or training the individual student in the skills needed to be successful in GE. Ultimately, this process forces a discussion of reintegration issues and allows for greater collaboration and communication between SE and GE.

Step 2: Plan for Reintegration

Once the reintegration and exit process moves to Step 2, the tasks are essentially the same in systems using traditional SE identification practices as well as those used in school systems using a problem-solving model. These tasks include: determining which team members are needed for planning, when reintegration should occur, measures to be implemented and frequency of progress monitoring activities, person(s) responsible for measurement activities, supports and accommodations that are necessary for success, length of the reintegration trial, and techniques for eventually fading the plan and supports (see Figure 1).

The reintegration planning team includes those individuals who have direct knowledge of the target student's current academic skills and behavioral status and anyone who may instruct the child in the new class. Teams should include the parent(s) of the student, the SE teacher, the receiving GE teacher(s), and the student, if appropriate. Teams also may include paraprofessionals, administrators, and support staff (e.g., school psychologist, speech pathologist, behavior intervention specialist, etc.). If the student is involved with outside agencies (e.g., mental health provider, medical personnel, social worker, case manager), it may be appropriate to invite representatives to attend the planning meeting(s) to coordinate services.

Reintegration may occur as soon as the team's reintegration plan can be implemented. It is possible that the student could be placed immediately into the GE environment for the domain considered. In other cases, the student might be introduced to the new environment gradually. For example, the plan may call for the student to be involved in only a portion of a class (e.g., group discussion, teacher-led instruction, pre-writing activity). The student might then receive assistance from a SE support person or a paraprofessional to complete the required assignments. Over a period of time, the student's involvement in the GE class would increase as the student increases timely work completion and accuracy. Another example involves the student reintegrated into a GE class with adequate skills to complete assignments, but lacks behavioral strategies to follow rules, remain academically engaged, interact with peers appropriately, etc. This student's plan may call for reintegration in the receiving class with incremental increases in time being dependent upon the student's skills in maintaining appropriate behavior.

As stated in Step 1, the techniques needed to monitor student progress in the reintegration environment and the length of the trial period are based on the academic skills or behaviors of interest. These decisions will be based on research related to the target behaviors and professional judgment. For example, the literature on reintegration in reading indicates that a minimum of 8–12 weeks of CBM progress monitoring is recommended (Powell-Smith & Stewart, 1998). Ultimately, academic skills or target behaviors must be monitored over an appropriate time frame to determine the student's success or lack of progress within the new environment. The reintegration plan should include specific review periods at which time student performance data can be reviewed and alterations made in the plan if needed.

As a part of the reintegration plan, it is appropriate that team members be assigned specific tasks to complete before the next review period. The plan should be clear regarding the exact measurement techniques to be used and the person(s) responsible for data-collection activities. Team members should be willing to step outside their traditional roles to support the success of the reintegration plan. For example, paraprofessionals and school psychologists are excellent members to support data collection efforts. Any training needs for personnel unfamiliar with data collection techniques should include follow-up support and reliability checks to ensure treatment integrity. Timelines for plan implementation and data collection should be specific with agreed upon review dates set in advance.

Modifications of the reintegration plan may occur, if necessary. The planning team should meet at periodic intervals to review and document the progress-monitoring data and to consider the accommodations and supports necessary for student success. Many modifications may mirror those that are typical for all students. For example, repeating directions, additional time for task completion, adjusting task length, frequent prompts and feedback, mass practice of skills, and individual or small-group instruction from teacher, paraprofessionals, or Title I teachers, all may be possible accommodations. Considering supports that occur naturally within GE will help the student generalize and maintain skills after the reintegration plan is faded. Modifications must be *documented* so that the team can determine the types and levels of support necessary for a student to succeed. This documentation coupled with progress monitoring data also allows the team to determine if and when support can be faded should the target student demonstrate significant progress in the new environment. Conversely, if documentation demonstrates that the levels of accommodations and supports are so significant that GE cannot sustain them, then the student may not be ready for reintegration.

Step 3: Monitor Reintegration Success

Once the reintegration plan is completed, it is necessary to begin the trial reintegration period and the data collection activities delineated in Step 3. Determination of reintegration success will be based on the results of both direct and indirect data collection methods. Direct data collection procedures will include assessing the target student's academic achievement and behavior through progress monitoring activities specified in the plan. Also, plan implementation integrity will be monitored through direct observations of intervention adherence. The measures of treatment integrity may indicate that additional training is necessary for participants to successfully carry out their responsibilities as the plan indicates.

Indirect measures of the plan's success may include questionnaires about participants' level of satisfaction with the reintegration plan, the interventions, and the training and support for implementation and data collection. It also will be important to survey attitudes of parents, the reintegrated student, general and special education teachers, and paraprofessionals about the success of reintegration trial (see Powell-Smith & Stewart, 1998, for examples). School psychologists can play a vital role in providing the training for progress monitoring, assessing treatment integrity, and in developing surveys that assess participant satisfaction with the reintegration process.

Step 4: Determine Reintegration Success

After the reintegrated student has been monitored for the length of time specified in Step 2, a determination about the success of reintegration can be made. All monitoring data collected up to that time are examined along with data collected on teacher, student, and parent attitudes toward the reintegration. The monitoring data are important because they provide both formative and summative information about the impact of reintegration on the student's skills. From these data, we can examine whether the student's progress is commensurate with that of the GE peer comparison group. Parent and teacher attitudes are important to gauge because their involvement in the process is consistent with best practices. Also, their attitudes may present possible barriers to continued reintegration efforts. Student attitudes are important to assess as they also may influence the success of reintegration efforts (Powell-Smith & Sheble, 2001). The length of the reintegration trial also should be examined.

Finally, the question of whether the student is ready to exit SE is asked. No set timeline for making such decisions exists because there is very little research in this area. Clearly, this decision should be based upon the data gathered and professional judgment. If the answer to the question is yes, then we proceed to Step 5. If the answer is no, the process cycles back to Steps 2 and 3 to review the initial reintegration plan, determine if plans were implemented as designed, and re-examine the monitoring and attitude survey data collected. A critical question at this point is, does the student still need support(s)? If the answer is yes, the team needs to make the necessary modifications to the original plan developed at Step 2. Once the modified plan is implemented, the process moves to Step 3 and so on.

Step 5: Special Education Exit in Goal or Domain Area

Step 5 is the culminating activity in the reintegration process. At this point, the team has reviewed the data and decided that SE exit in the goal area(s) or domain(s) for which the child was reintegrated is appropriate. This decision involves professional judgment based upon the preponderance of the data. Not all students will progress to Step 5 (e.g., those with more significant disabilities, those that began much farther behind). Some students may need greater support in content areas or upon reaching middle or high school. Also, there is no reason a student could not be considered again for SE services should they become necessary in the future. However, these steps are designed to preserve the SE continuum, while forcing a closer examination of LRE and exit decisions.

SUMMARY

Reintegration is a process by which students receiving SE are returned systematically to the GE environment for instruction. The process is not to be equated with "mainstreaming" or "inclusion," both of which indicate that students continue to need SE services. Rather, candidates for reintegration are those students who originally were identified as needing special services, but no longer demonstrate large gaps in their academic skills or behavioral repertoire. In other words, the problem(s) that resulted in SE placement no longer warrant SE services. These students may be appropriate for instruction in the same environment as their GE peers, with the eventual possibility of exiting SE on a permanent basis.

Considering SE students for reintegration is no longer an afterthought, but rather is an integral part of the IEP process and service delivery. Neither is reintegration an all or nothing decision. It is a process that is accomplished by determining the LRE for students on a case-by-case basis. This single subject model of examining a student's appropriateness for reintegration results in the most appropriate educational decisions for individual children.

Planning for reintegration of a student occurs at the onset of the IEP process. Implementing a trial reintegration plan is accomplished by incorporating a problem-solving framework that involves persons who are key to student success, identifies student needs and current levels of performance relative to those of GE peers, and makes data-based decisions about student progress on a frequent and repeated basis. If the data collected indicate that a student is successful according to the grading standards established in GE environments, then that class may represent the LRE for that student.

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Kame'enui, E. J., & Darch, C. B. (1995). *Instructional classroom management.* White Plains, NY: Longman.

This book outlines an instructional approach to classroom management, a technique that emphasizes proactive teaching of expected classroom behavior. The impact of instructional task dimensions such as complexity, modality, and response form on classroom management is discussed along with how to integrate classroom management during each temporal phase of instruction. Assessment models, as well as chapters on reinforcement, punishment as a transition tool, and a three-phase implementation across a180-day school year, are presented. A procedural model for managing persistent behavior problems is also provided along with the features of an effective school-wide discipline policy.

Paine, S. C., Radicchi, J., Rossellini, L. C., Deutchman, L., & Darch, C. B. (1983). *Structuring your classroom for academic success.* Champaign, IL: Research Press.

This book outlines basic classroom management techniques including classroom organization, involvement of others in the classroom, use of teacher attention and classroom rules, managing materials and paperwork, and managing behavior problems. Feedback chart procedures for developing good work habits and guidelines for phasing out special procedures also are presented. The procedures are based on the Direct Instruction Model. The authors provide a survey of relevant research at the end of each chapter, as well as scripts that teachers can use to implement each technique.

Powell-Smith, K. A., & Stewart, L. H. (1998). The use of Curriculum-Based Measurement in the reintegration of students with mild disabilities. In M. R. Shinn (Ed.), *Advanced applications of Curriculum-Based Measurement* (pp. 254–297). New York: Guilford.

This chapter provides an overview of the Responsible Reintegration of Academically Competent Students (RReACS) model for students with mild disabilities, including the philosophical and legal foundations for the model and the incorporation of CBM in the six implementation steps. Research outcomes of RReACS, such as numbers of potential candidates for reintegration based on both nomothetic and idiographic approaches, teacher and parent attitudes toward reintegration, and student achievement outcomes also are presented.

Sprick, R., Garrison, M., & Howard, L. (1998). *CHAMPs: A proactive and positive approach to classroom management.* Longmont, CO: Sopris West.

The authors of this book present a research-based model

for classroom management for grades K through 9. The CHAMPs behavior program consists of eight modules, each representing a key aspect of effective classroom management: Vision, Organization, Expectations, the First Month, Motivation, Monitor and Revise, Correction Procedures, and Class-wide Motivation Systems. The modules include self-assessment tools as well as activities and discussion questions that can be used by teacher work groups. CHAMPs emphasize teacher expectations, and each letter in the acronym stands for a type of expectation that should be clarified for students: Conversation (can students talk?), Help (how do students request help?). Activity (what is the objective of the activity?), Movement (can students get out of their seats?), and Participation (how do students show they are participating?).

AUTHOR NOTE

The authors would like to express their sincere gratitude to Angela Sheble for her assistance with the annotated bibliography for this chapter.

37 Best Practices in Defining Student Goals and Outcomes

Lynn S. Fuchs
Peabody College of Vanderbilt University

OVERVIEW

The importance of goals in understanding human behavior is critical. Individuals organize their activities around sets of goals that relate to their current levels of performance and their aspirations, and the nature of an individual's goals and his or her daily strivings are intimately intertwined. In a similar way, schools are organized around sets of goals, which relate to age-appropriate societal expectations, and the nature of those goals and the curricula of schools, or what teachers teach, are inextricably connected. Clearly written justifiable goals and procedures for evaluating goal attainment are potentially key factors to successful educational programs. Over the years, the press to specify clear and measurable outcomes for individual students has increased dramatically. The purpose of this chapter is to discuss the history, context, purposes, and applications of goals and to present alternative methods for accomplishing the specification of useful, manageable goal statements.

History and Rationale

Prior to the turn of the twentieth century, psychologists viewed the brain as a composite of general intellectual faculties that, when strengthened, could be applied to any area of human activity. So, if educators identified faculties and strengthened them, they would expect concurrent educational growth. At the turn of the century, however, Thorndike demonstrated the specificity of transfer, such that learning occurs when elements in the original content are relevant and similar to elements in other contexts. Applying Thorndike's work to the development of educational curricula, Bobbitt (1918) argued that human life consists of the performance of specific activities, and the numerous skills and knowledge required for successful adult life should constitute the curriculum of schools.

Consequently, psychologists began to develop the notion that general intellectual growth might be operationalized into series of learning products. This premise was central to Ralph Tyler's work in curriculum and instruction. Tyler viewed evaluation as the demonstration of the ways and extent to which students have changed in relation to a set of desired outcome behaviors. While in charge of the 8-year study of secondary education for the Progressive Education Association, Tyler emphasized successfully the need to define educational goals in terms of student behaviors and specific content. A product of that study was Smith and Tyler's book, *Appraising and Recording Student Progress* (1942), which lists numerous behavioral objectives. In his role as director of the National Assessment Project, Tyler required that educational objectives constitute the groundwork for developing curriculum materials and instructional procedures and in designing evaluation instruments to appraise the effectiveness of these newly developed materials and procedures (Bloom, Hastings, & Madaus, 1971).

Psychologists such as Gagne, Glaser, and Mager also were interested in developing clear statements of educational objectives. In contrast to Tyler who was interested in evaluation, however, those investigators were interested primarily in the development of effective instruction. Their focus was on task analysis or the description of behavioral outcomes in terms of a repertoire of discrete behaviors that must be sequentially built to arrive at a terminal performance. The work of Gagne and others served to develop further the notion that school-related growth could be operationalized and segmented into very small units.

Perhaps one of the major impacts of the use of distinct behavioral objectives in schools was to render local educational agencies more accountable to the public for the content and effectiveness of their programs. Similarly, in special education, accountability was one of the important rationales for mandating the development of Individual Educational Programs (IEPs), which include annual goals and short-term objectives. Developers of PL 94-142 intended that the IEP statement of goals, along with procedures and criteria for determining whether goals are being met, would assure that schools were accountable to students, parents, and taxpayers for the quality of the programs they provided students with disabilities (Turnbull & Turnbull, 1978). Unfortunately, in the first two decades of P.L. 94-142's implementation, accountability focused almost exclusively on procedural compliance, or documenting that goals and objectives were written and that services were provided.

Current Context

In more recent years, as concern about this country's academic and workplace competitiveness has increased, the demand for accountability for student outcomes has increased within special education and spread across the entire educational system. In September 1990, President George Bush convened an historic education summit with the nation's governors at the University of Virginia, the only time in our country's history that such a summit has been held to discuss issues pertaining to education. In his concluding remarks, President Bush discussed the overwhelming need to establish "accountability for outcome-related results."

This distinction between procedural and outcome accountability is particularly relevant to special education. As stated, following passage of P.L. 94-142 in 1975, the field witnessed a 20-year focus on procedural compliance. In 1995, however, in synchrony with the accountability movement within general education, the field began to refocus attention on the question of what students are learning, rather than what services are being provided. As we entered the second half of the last decade of the century, when resources became tighter, when we increasingly began to compete economically in an international marketplace, and when the disparities between the wealthy and poor grew, accountability became the operant word for justifying increasing funds for schooling. The public required that schools demonstrate student improvement or results to justify increased expenditures, including funds for special education.

With the 1997 amendments to the Individuals with Disabilities Education Act, this focus on accountability for student outcomes became officially codified into law. All students with disabilities are now required to be included within general education accountability frameworks and to be included within all public reports of student outcomes. In addition, the focus on student outcomes, rather than on procedural compliance, within IEPs has become strengthened.

Purposes

As the press to account for the effects of schooling continues to mount, the critical issue is how to define our goals so they represent the most important outcomes for our students to achieve. In considering alternative methods for specifying our goal statements, three critical purposes for developing goals are relevant: (a) to direct teaching and curriculum development, (b) to guide learners, and (c) to structure evaluation and accountability.

DIRECTING TEACHING AND CURRICULUM DEVELOPMENT

Studies indicate that teaching with goals fosters student academic growth and teacher success. In an early study, for example, McNeil (1967) randomly assigned 77 university teacher trainees to two groups. In the experimental group, trainees contracted with their cooperating teachers for what student changes would constitute success; in the control group, practicing teachers familiarized themselves with class activities and prepared daily lesson plans. Both supervisors and cooperating teachers judged the experimental trainees as achieving greater success in teaching as evidenced by pupil achievement and the trainees' applications of learning principles. In a related experiment, McNeil added to these findings by demonstrating that student teachers effected superior student growth when their own grades depended on the appropriateness of the goals they selected for their students and on their students' mastery of those goals. Additional studies through the years have corroborated McNeil's early work, indicating that teaching with specific goals that focus on student outcomes increases teacher success and student achievement.

GUIDING LEARNERS
Industrial and social psychology studies of individual and group goals suggest that an individual functions better when clear about expected goals. Learning theory also supports the importance of students being aware of the goals toward which they strive. Such understanding theoretically helps learners recognize errors and improve performance, and this power to discriminate among responses affects the attainment of skills. In addition, a substantial number of studies documents that student knowledge of goals enhances learning.

STRUCTURING EVALUATION
As was already discussed, a primary impetus for the use of goals in education has been to structure the evaluation, or accountability, process. Once a well-formulated goal has been specified, it structures the methods for assessment and evaluation.

BASIC CONSIDERATIONS: BACKGROUND FOR SCHOOL PSYCHOLOGISTS

With changing demographics in the school-age population, school reform efforts that focus more on collaboration among professionals, and inclusion of students with disabilities within general education classrooms, the need for solving individual student problems should increase and the roles that school psychologists serve in the schools should continue to become more varied. Consequently, the need for school psychologists to assume the role of problem solvers and to adopt a problem-solving approach to their professional activities should grow.

The concept of a problem-solving approach, as presented in this volume, is characterized by defining problem behaviors in behaviorally specific and discrete form, assessing those behaviors by using low inference methods, setting goals in relation to baseline levels, formulating interventions to ameliorate problem behaviors, direct and frequent monitoring to gauge progress, and terminating services when goals have been realized. Central to guiding a successful problem-solving approach, consequently, is the definition of the problem and specification of the goal: With a well-specified goal, the evaluation and assessment process is structured, the teaching and intervention process is directed, and learners are guided toward problem solution. In school settings where a problem-solving approach is central to the innovation process, school psychologists need to be prepared to assist fellow professionals in developing important and useful goal statements. To be prepared, school psychologists must be grounded in the principles that guide useful goal statements.

Principles for Useful Goal Statements

In this section, basic considerations are reviewed for writing useful goal statements. Through the information presented, the argument is that effective goals must be student centered, clear and precise, ambitious, focused on long-term outcomes, descriptions of generalizable behavior within authentic settings, and developed through a collaborative process.

STUDENT-CENTERED VERSUS TEACHER-CENTERED
In useful goal statements, the verb does not describe teacher activities (e.g., the teacher will teach early civilization). Such statements of teachers' plans are helpful only after we have determined what we want students to accomplish. Consequently, outcomes that describe what we want students to accomplish should be the focus for direction and evaluation of instruction and, correspondingly, for our goal statements.

The relationship between teacher- and student-centered goals is analogous to the relationship between learning processes and learning products. For Teacher A, the learning process might include having students trace letters in the air and complete Frostig worksheets; for Teacher B, the learning process might include providing phonics instruction and lots of opportunity for students to read literature. In both cases, however, the learning product, or goal, is identical: reading first-grade text proficiently.

As this example illustrates, goals should not provide outlines of the instructional methods or describe the content to be covered in a curriculum. When goals do focus on instructional methods or content coverage, those goals are met when the instruction has been provided or the content has been presented, regardless of whether students have changed in any intended way. Unfortunately, in many school districts today, a strong emphasis on content coverage exists, pressing teachers to cover material in lockstep fashion, regardless of whether students are learning the presented material. In contrast to such a focus on content coverage, goals should focus on student mastery.

CLEAR AND PRECISE

Research (e.g., Melton, 1978) indicates that the more clear goals are, the more likely participants are to attempt to meet them. This finding corroborates learning and measurement theory indicating that clear goals provide more useful information both to learners for discriminating correct performances and to professionals for structuring instruction and evaluation.

AMBITIOUS

If we accept the premise that goals are important in directing human behavior, then the ambitiousness of the goal must be critical in determining how functional the goal will be. If goals are too easy to attain, then they fail to sustain meaningful behavior. If, on the other hand, they are exceedingly difficult to achieve, then they may serve to discourage functional behavior.

Within educational settings, unambitious goals, which are relatively easy to achieve, may allow educators to appear more successful than they really are. By contrast, appropriately ambitious goals, which may reduce the appearance of success in the short run, may intensify programs and serve to enhance outcomes in the long run.

In investigating the issue of goal ambitiousness, Fuchs, Fuchs, and Deno (1985) explored the relation between student achievement and goal ambitiousness and goal mastery. Participants were 58 special education students for whom teachers assessed baseline performance and set reading goals employing a standard format. On the basis of the relation between baseline and the stated goal, students were assigned to highly ambitious, moderately ambitious, and low goal groups. For 18 weeks, teachers worked to achieve their goals. At the beginning and again at the end of the study, student achievement was measured; at the end, goal mastery was determined. Analyses revealed that the ambitiousness of the goals was associated positively with achievement. Goal mastery, however, was not. That is, teachers who geared their efforts toward more ambitious goals effected better achievement outcomes, regardless of whether or not students actually met their goals.

In a related study, Fuchs, Fuchs, and Hamlett (1989) contrasted two decision-making structures used in conjunction with an ongoing assessment system; that is, Curriculum-Based Measurement (CBM). Ten teachers participated in a contrast group, in which CBM was not used. Ten teachers participated in a conventional CBM treatment in which, once the goal was specified at the beginning of the year, teachers were free to increase their goal at any time; and the formal decision rules, however, never required them to increase the goal. The final group of 10 teachers participated in a CBM treatment in which the decision rules prompted an increase in the goal whenever the student's performance indicated that the student might be able to surpass the initially specified goal.

At the end of a 15-week treatment period, results indicated that teachers in the goal-raising treatment actually did increase goals more frequently than the conventional CBM treatment teachers. Moreover, as might be expected, the goals of the goal-raising teachers were more ambitious than the conventional CBM treatment teachers by the end of the study. Most importantly, however, the achievement of the students in the goal-raising treatment surpassed that of the contrast group, whereas the achievement of the conventional CBM treatment group did not.

Consequently, it appears important for practitioners to specify ambitious goal statements. Unfortunately, guidelines for determining ambitious goals for individual students are difficult to identify. In sections to follow, I review some specific methods for monitoring goals and ensuring appropriate goal ambitiousness.

LONG TERM VERSUS SHORT TERM

A basic distinction between classes of goal statements is whether they focus on what the student will accomplish in a short time frame (i.e., within the next week or month) or whether they focus on what the student will accomplish in a longer time frame (i.e., by the end of the year).

With a short-term goal approach, the teacher specifies a hierarchical curriculum, representing the sequence of skills to be mastered during the year. Each skill in this hierarchy then becomes the target of one short-term goal. For example, if the teacher planned for the student to master phoneme-grapheme associations at the beginning of the year, then the teacher would specify a goal indicating mastery of phoneme-grapheme associations, and would focus on this goal until mastery was demonstrated. Then, the teacher would refocus on the next goal in the hierarchy: perhaps reading consonant-vowel-consonant words. In this way, throughout the year, the teacher would periodically shift goal statements, as skills in the hierarchy were sequentially mastered.

By contrast, with a long-term goal approach, an annual goal is specified, and a large pool of related measurement items is created. For example, if the long-term goal were for the student to read third-grade text proficiently, a large pool of reading passages representing third-grade text would be prepared, from which passages could be drawn for frequent measurement of the student's reading proficiency. Regardless of the teacher's current instructional methods, the goal statement (and its related measurement strategy) would remain constant.

Short- and long-term goal approaches differ conceptually and practically (see Fuchs and Deno, 1991, for discussion). With a short-term goal approach, the goal focuses on the current instructional material and makes goal attainment relatively easy to realize. Because of those dimensions, short-term goals are relatively sensitive to the effects of instructional programs and, therefore, can be satisfying for teachers and students.

Distinct disadvantages, however, also apply to a short-term goal approach. First, because the goal structure requires mastery of one goal before instruction on the next goal can begin, the validity of this hierarchy for an individual child is critical. Unfortunately, the hierarchy specified with a short-term goal approach almost always is hypothetically rather than empirically determined and, therefore, often of questionable relevance for an individual child. Second, because a short-term goal approach focuses on one skill at a time, it does not address cumulative mastery and coordinated use of multiple skills. Consequently, it is not unusual, especially for students with learning difficulties, for teachers to find that, although students have mastered single skills sequentially through the year, those students have failed to demonstrate the capacity at the end of the year to utilize the multiple skills in an integrated fashion. Such a failure may explain the documented, relatively poor relation between number of skills mastered during the year and performance on end-of-year global achievement tests. Essentially, although it takes longer to see student improvement with a long-term goal approach, long-term goals better represent the ultimate desired outcome that we want to see students demonstrate.

At a practical level, a long-term goal approach offers additional advantages because, typically, only one goal statement is needed to describe the outcome we expect within a given domain. This translates into one elegant system for monitoring the student's acquisition of desired outcomes. By contrast, with a short-term goal approach, many different goal statements are required; and, for each statement, a different system for monitoring mastery is required. This can lead to a complicated, unmanageable system. For example, Safer and Hobbs (1979) reported that nearly one-quarter of the IEPs they examined were at least 11 pages long, with goal statements comprising most of the documents. These goals covered small details that essentially outlined the components of the instructional programs the students were to receive. Numerous, specific goals render the task of monitoring progress cumbersome: With an excessive number of goals to track, teachers are faced with the overwhelming task of designing and administering measurement procedures for multiple goals, a situation that often leads to infrequent compliance with the IEP monitoring requirement (Thurlow & Ysseldyke, 1979). A long-term goal approach can streamline the process of monitoring goal attainment and, thereby, enhance compliance.

DESCRIBE GENERALIZABLE BEHAVIOR WITHIN AUTHENTIC SETTINGS

Related to a focus on long- rather than short-term goals is the notion that, to the greatest extent possible, goals should describe generalizable behavior within authentic settings. To illustrate this principle, consider the following proposition: Goals that focus on reading connected text represent more generalizable behaviors and are more applicable to real-world tasks than are goals that focus on reading lists of *r*-controlled words. In a similar way, goals that focus on spelling words correctly within naturally written compositions represent more generalizable behaviors and are more applicable to real-world tasks than are goals that focus on spelling lists of dictated words.

The extent to which we can focus our goals on the real-world outcomes we desire of students, the more those goals are authentic and the greater the probability that the instruction teachers provide and the evaluation methods they employ will result in students' acquisition of important, global skills for successful life adjustments. Consequently, goals should be statements about broad skills within even broader domains. They structure what broad skills a child will attain in a relatively long time frame. What follows are relevant questions for practitioners to ask as they consider alternative goals: Is this outcome necessary for students to function ultimately in complex heterogeneous community settings? Could students function as successful, employed adults if they did not accomplish this outcome? Do other, more important outcomes exist relating to overall academic or social competence?

DEVELOPED THROUGH A COLLABORATIVE PROCESS

Useful goals tend to be formulated through a collaborative process in which multiple perspectives about what constitutes critical outcomes for an individual child are consulted. Relevant participants include current teachers across different subjects or settings, future teachers who will receive students at higher grades or in less restrictive settings, parents, community representatives including potential employers, coaches, and church leaders, as well as current and former students. School psychologists, because of their frequent training in collaboration and consultation, can be the ideal professionals for coordinating such a collaborative process for formulating goals.

BEST PRACTICES

In this section, three practices for identifying and monitoring the attainment of critical outcomes are discussed: goal attainment scaling, curriculum-based measurement, and a standard core of outcomes. In addition, once the critical outcome has been identified, a level of desired performance typically must be specified. Therefore, this section concludes with a review of three strategies for selecting performance levels: referencing goals to inter-individual norms, employing intra-individual norms, and comparing an individual's own performance over time.

Practices for Identifying and Monitoring the Attainment of Critical Outcomes

GOAL ATTAINMENT SCALING

Goal Attainment Scaling (GAS) (Carr, 1979; Lenz, Ehren, & Smiley, 1991) involves establishing goals and specifying a range of outcomes that would indicate progress toward achieving those goals. GAS comprises four essential steps. First, the teacher, student, parents, and principal decide mutually on general goals such as "improved personal grooming" or "reduced errors in number facts." Second, each participant assigns a weight or number value to each general goal so that the summed weight across all the general goals equals 100. Third, the teacher breaks down each goal into a set of concrete behaviors. These behaviors represent a continuum of alternative behavioral outcomes ranging from most to least desirable within each general goal; a description of the likelihood that the behavioral statement will be achieved is attached. Finally, a student's functioning at any given time is described numerically: Within a goal, the best-fitting behavioral statement (with its corresponding numerical value) is identified; across goals, the products are summed.

In terms of the principles specified earlier in this paper, GAS satisfies some criteria for useful goals more than others. Its strengths include a focus on student outcomes rather than on teacher outcomes; its clarity and precision; its potential for encouraging ambitious outcomes; and its deliberate emphasis on a collaborative process for formulating outcomes. Depending on how GAS is implemented, however, it does not necessarily satisfy the criterion for a long-term approach to goal setting, and it may fail to meet the critical condition that the goal behavior focus on generalizable behavior necessary in authentic settings. Nevertheless, if practitioners employ GAS with a conscientious attempt to focus participants on long-term outcomes that require generalizable behavior in authentic settings, then GAS can meet the multiple principles offered in this chapter for useful goals.

CURRICULUM-BASED MEASUREMENT

CBM (Deno, 1985; Fuchs & Fuchs, 1998) is a set of procedures for monitoring student progress. To monitor student progress, it is necessary to identify the goal toward which progress is referenced. Consequently, a major dimension of CBM methods is goal specification.

Within the CBM research program, questions pertaining to how to specify goals became subsumed under the larger question of "What to Measure" (see Deno & Fuchs, 1987). In studying what to measure, CBM developers specified alternative procedures for measuring a student's proficiency within a domain (e.g., in reading: answering questions about the content read versus reading a list of words aloud versus reading connected text aloud versus restoring missing words in text). Then the researchers investigated how well each procedure (a) related to other socially important measures of proficiency, (b) could be implemented accurately, (c) reflected student growth, (d) could be integrated for frequent measurement within the context of busy and complicated classroom settings, and (e) could be used by teachers to improve their instructional program and enhance student achievement.

In each content area (i.e., reading, spelling, written expression, and mathematics), one or two alternative formats for specifying annual outcomes satisfied the multiple criteria. For example, research (see Shinn, 1989, for synthesis) supported reading connected text aloud as a critical indicator of overall reading proficiency. Reading aloud from connected text (a) relates well to many other socially agreed upon indicators of reading proficiency, (b) is simple and straightforward so that it could be implemented accurately, (c) reflects student growth as it occurred, (d) can be integrated into busy classroom settings, and (e) can be used by teachers to improve their instructional programs and enhance student achievement.

This overall indicator of reading proficiency, reading connected text aloud, could be incorporated in end-of-year goal statements to represent the outcome teachers expect in the area of literacy. In applying the principles specified earlier in this chapter, reading connected text aloud meets the requirements for useful goal statements. It specifies what students, rather than teachers, will accomplish. It communicates clearly and precisely about expectations. It can be used to frame ambitious levels of desired performance. It focuses students and teachers on the long-term outcome that we expect at the end of the year. It requires that long-term outcome represents generalizable behavior, which requires integrated performances of multiple skills (e.g., reading words with different phonetic patterns, reading sight vocabulary, using comprehension to enhance fluency) and which is necessary in authentic settings. And it specifies the level of desired behavior or the text within which the performance will be expected can be specified through a collaborative process involving individuals with a variety of perspectives.

In addition, CBM provides an elegant system for monitoring students' goal attainment. Within an academic domain it requires practitioners to measure only one integrated system that simultaneously represents the multiple components of the teacher's curriculum and instructional program. Therefore, it can be used efficiently and feasibly.

STANDARD CORE OF OUTCOMES

The notion of a standard core of outcomes represents an extension of CBM. The basic idea (Deno, personal communication, 1993) is that, within any behavioral domain, the field can identify standard tasks that (a) represent overall indicators of proficiency, (b) can be used to specify the outcomes of schooling that are critical to successful life-long adjustments, and (c) can structure a measurement process whereby practitioners can efficiently monitor a student's standing and attainment of critical outcomes.

Although a comprehensive system of standard outcomes has yet to be developed, the initial work on CBM in the areas of reading, spelling, written expression, and mathematics provides a model for subsequent development of a system of standard outcomes. A key distinction between CBM and a comprehensive system of standard outcomes is that, unlike CBM, the goal statements within a comprehensive system of standard outcomes is not linked to the student's curriculum. An advantage of disconnecting the specification of goals or outcomes from the student's specific curriculum is that the disconnection allows all students to be described in reference to the same standard; and this facilitates comparisons across specific settings and contexts. See Fuchs and Deno (1991) for a discussion of the advantages and disadvantages of measuring students directly from their own curriculum.

In all other ways, however, a system of standard outcomes should enjoy the benefits of a system like CBM: The outcomes are student centered, are clear and precise, can encourage ambitious expectations, and focus on long-term goals and generalizable behavior in authentic settings. Moreover, such a system requires collaboration across parties representing multiple perspectives.

Practices for Selecting Levels of Performance for Goals

Once a basic framework for specifying a goal has been identified, the difficult task of selecting a level of desired performance remains. Consequently, if the school psychologist determines, in coordination with school staff, that a GAS framework will be adopted, then the school psychologist still needs to identify what levels of outcomes should be incorporated into, for example, the on-task goal statement (e.g., most unfavorable outcome: student is on task 10% of the time; less than expected outcome: student is on task 25% of the time; expected outcome: student is on task 50% of the time). If the school psychologist determines, in coordination with the school staff, that a CBM framework will be adopted, then the school psychologist still needs to identify what levels of outcomes should be incorporated into, for example, the reading goal statement (e.g., given third-grade passages from the Holt curriculum, the student will read 125 words correctly in 1 minute). In this next section, alternative strategies for identifying levels of performance for goal statements are reviewed.

REFERENCING TO INTER-INDIVIDUAL NORMS

As was illustrated in the early work of Deno and Mirkin (1977), one sensible strategy for selecting levels of performance for goals is to measure other, more proficient students' levels of performance in the relevant domain and to set the target student's goal so that the student will demonstrate performance commensurate with that of the more competent peers.

In the most simple, manageable version of inter-individual norm referencing for the specification of performance levels, a school psychologist may sample several students within a general education classroom at the appropriate grade level. Let's say, for example, that Charlie is a student with a learning disability, receiving reading instruction within the special education resource room. The special educator deems fourth-grade material as a reasonable level of difficulty within which the student may achieve competence by the end of the year, and the teacher specifies the goal as, "Given fourth-grade passages from the Holt series, Charlie will read X words correct within 1 minute." The teacher does not, however, have a concrete way of operationalizing "competence" for specification in the goal statement; that is, the teacher does not know how many words correct Charlie should read to denote proficiency. The school psychologist can assist the teacher by sampling three to five students from two different fourth-grade classrooms: having each student read fourth-grade passages for 1 minute, averaging the scores, and using this number to denote proficiency for Charlie.

This method has the advantage of being empirically based, even as it focuses the teacher on a level of proficiency that should facilitate the target student's re-entry into a less restrictive setting should the goal be achieved. Nevertheless, this method is also problematic because while Charlie is striving toward the empirically derived criterion of performance, his general education peers also are improving. Therefore, when Charlie achieves the specified goal, his general education peer will have surpassed Charlie's achievement.

At least partly because of this problem, some school systems have moved to establishing norms for their school district or schools, within their selected goal framework. Some districts that rely on CBM methods for goal specification, for example, have collected norms describing how many words per minute typical students in the districts' schools read aloud from grade-level material at the beginning, middle, and end of the academic year. With such norms routinely available, practitioners have a database that allows appropriate inter-individual goal levels to be specified at any time. Shinn, Tindal, and Stein (1988) describe methods for collecting local CBM norms.

REFERENCING TO INTRA-INDIVIDUAL NORMS

Inter-individual norms for setting goals are empirically defensible and allow special educators to set their expectations in terms of how students within general education perform; that is, facilitating sound decisions about when students with disabilities may be moved successfully across instructional settings. Unfortunately, this method of establishing performance criteria for goals does not take into consideration a student's beginning of the year performance:

All third graders may have year-end reading goals set at the normatively appropriate level of 125 words read correctly per minute (WCPM). However, for a student with a beginning rate of 75 WCPM, this goal would represent an expected weekly increase of 1.67 WCPM ([125 – 75]/30 weeks); for a student with an incoming rate of 25 WCPM, the expected weekly increase would be considerably larger ([125 – 25]/30 weeks = 3.33 WCPM). Consequently, relying on cross-sectional normative data can result in varying standards for weekly rates of growth.

One alternative method for specifying performance criteria for goals is to monitor intra-individual student progress over time and to calculate normative data directly from students' weekly rates of improvement. With such a method, students in a school district are to be monitored in terms of the number of words they read aloud from text each week. At the end of the year, the average weekly rate of improvement is derived for typical students at each grade level within a performance domain. Then, the weekly rate of improvement is used to specify the performance criterion.

For example, as illustrated by Fuchs, Fuchs, Hamlett, Walz, and Germann (1993), when measured each week in terms of the number of words read aloud from text in 1 minute, second-grade students typically increase 1.46 words each week. Consequently, if a goal were specified for a student to read second-grade text, a teacher could select a performance criterion that establishes a weekly rate of growth commensurate with what we would expect normally achieving second graders to demonstrate; i.e., approximately 1.50 words per week. So, if the student initially read 35 WCPM from second-grade text, the performance criterion might be 80 WCPM ([1.5 x 30 weeks] + 35). Although this outcome may not place the student at a level commensurate with normally achieving second graders at year's end, it would denote a rate of progress commensurate with normally achieving second graders.

INTER-INDIVIDUAL COMPARISONS OVER TIME

A third option for specifying the performance criterion also involves empirical determination. In contrast to an inter-individual or an intra-individual normative approach, however, this third option does not rely on other children to derive the empirical determination. Rather, it relies on the student's own rate of improvement to formulate the end-of-year goal in a data-based dynamic (i.e., ever-changing) way.

As was illustrated by Fuchs et al. (1989), after a teacher relies on professional judgment to specify an initial performance criterion, the teacher continuously monitors the student's progress. When the student's rate of progress matches or exceeds the rate of improvement specified in the initial goal, the teacher increases the end-of-year goal, in an attempt to maintain ambitious goals, relative to what the student is demonstrating he/she can achieve.

For example, let us say that the student's baseline performance was 35 WCPM in fourth-grade text and that the teacher's best judgment was that for the end of year goal (30 weeks away) the student would read 70 WCPM in fourth-grade text (i.e., a weekly rate of improvement of 1.16 words ([70 – 35]/30 weeks). After 6 weeks of implementing the teacher's instructional program, she finds that the student is increasing the weekly score by 1.6 words. At that time, the end-of-year would be reset to 83 (after 6 weeks, the student's current performance level is 44.6; that is, [1.6 x 6 weeks] + 35 baseline; for the next 24 weeks, she will now expect a continued weekly increase of 1.6: [1.6 x 24 weeks] + 44.6 = 83). The teacher continues to monitor the student's performance each week. In this way, whenever the student's weekly rate of improvement increases, the goal is reset accordingly always using the student's own best performance to determine an appropriately ambitious performance criterion for that individual student.

SUMMARY

The focus of this chapter was specifying student goals and outcomes. After the topic was defined and the history, rationale, and current context were explored, three purposes for focusing attention on goals and outcomes were specified: directing teaching and curriculum development, guiding learners, and structuring evaluation. Then, applications for school psychologists were reviewed and basic considerations for writing useful goals statements were described. These basic considerations indicate that goals should be student centered, clear and precise, ambitious, focused on long-term outcomes, descriptions of generalizable behavior useful within authentic settings, and developed through a collaborative process. With those considerations as background, three alternative frameworks for specifying goals were described, Goal Attainment Scaling, curriculum-based measurement, and a standard core of outcomes. Finally, three empirical strategies for specifying performance criteria were discussed: inter-individual norms, intra-individual norms, and referencing to an individual's own ongoing performance.

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Carr, R. A. (1979). Goal attainment scaling as a useful tool for evaluating progress in special education. *Exceptional Children, 46*, 88–95.

This article provides a rationale and specific guidelines for implementing Goal Attainment Scaling. Examples of specific scales applicable to special education are presented and methods for scoring are illustrated.

Fuchs, L. S., Fuchs, D., Hamlett, C. L., Walz, L., & Germann, G. (1993). Formative evaluation of academic progress: How much growth can we expect? *School Psychology Review, 22*, 27–48.

This article provides an overview of alternative methods for formulating performance criteria within goal statements. A methodology for collecting intra-individual normative data is outlined; intra-individual norms for curriculum-based measurement in the areas of reading, spelling, and math are provided.

Shinn, M. R., Tindal, G., & Stein, S. (1988). Curriculum-Based Measurement and the identification of mildly handicapped students: A research review. *Professional School Psychology, 3*, 69–86.

This synthesis specifies a methodology for collecting inter-individual normative data for CBM and reviews previous studies investigating the utility of such a framework for identifying students for special education services.

38 Best Practices in Collaborative Problem Solving for Intervention Design

Sarah J. Allen and Janet L. Graden
University of Cincinnati

OVERVIEW

This chapter describes a process, collaborative problem solving, that can guide decision making and intervention planning for improving academic and behavior outcomes for students. The primary focus is on the two basic components of the term collaborative problem solving. *Collaborative* refers to the working relationship between the participants in problem solving—the teacher(s), parent(s), student, and school psychologist and/or other school personnel—who are *active, meaningfully involved participants* in all phases of planning and decision making. *Problem solving* refers to the *systematic approach* used to conceptualize a problem situation and identify needs, analyze factors contributing to the problem situation, design strategies to meet those needs, and implement and evaluate the strategies. Collaborative problem solving, with a foundation in consultation as a service delivery approach, is an effective and efficient way of providing services because it aims to help more students, focus on solving problems in direct ways, involve relevant individuals in the intervention planning, and ultimately enhance classroom and school success for students.

Collaborative problem solving as a model for organizing service delivery not only is well supported in the literature (e.g., Gutkin & Curtis, 1999; Idol, Paolucci-Whitcomb, & Nevin, 1994; Pugach & Johnson, 1995), but is consistent with directions in federal law and educational initiatives focusing on improving student outcomes. For example, the Individuals with Disabilities Education Act 1997 (IDEA 97) includes strong emphases on collaboration of key participants (e.g., parents, general education teachers) in all aspects of decision making, including "pre-referral" activities, and on linking assessment directly to intervention planning. School reform efforts nationwide emphasize increased performance standards and increased accountability, highlighting the need to use problem solving at all levels (individual student, targeted group, school-wide) to implement high quality intervention approaches to improve student learning and behavior outcomes. Educators and parents, in both general and special education, desire effective approaches for instruction and behavior to meet the needs of improving outcomes for *all* students (Roach, 1992).

As a method for systematically approaching assessment and intervention design, collaborative problem solving also represents a useful way for school psychologists to conceptualize and organize service delivery. By using a systematic approach to collaborate with others to clearly identify concerns, analyze and evaluate the factors affecting the concern, design and implement strategies to remediate or eliminate the problem situation, and evaluate specific intervention outcomes, problem solving provides an underlying framework for addressing the many different problems and needs of schools today. For example, collaborative problem solving can serve as a process to systematically address class-wide or system-wide intervention design (e.g., addressing school-wide positive behavior support, effective academic strategies, crisis intervention planning).

In a time when students are experiencing significant learning and emotional challenges and schools are struggling to meet diverse needs with sometimes fewer resources, school psychologists can be vital team members to address these issues. In many instances, this will require a shift from primarily diagnostic roles related to special education eligibility to the role of problem-solving facilitator and participant. The national context is conducive to such a shift in role and activities, as special education law specifically includes emphases on collaboration and linking assessment to intervention planning; similarly the National Association of School Psychologists' *Blueprint for Training and Practice* highlights the centrality of data-based problem solving across activities (Ysseldyke et al., 1997).

FOUNDATIONS FOR PROBLEM SOLVING

Collaborative problem solving as a framework for approaching problem situations has its foundations in many interrelated literatures in school psychology, psychology, education, and special education. Among its key foundations are a scientist-practitioner approach; ecological and behavioral approaches to conceptualizing problems, assessing, and intervening; and consultation.

Scientist-Practitioner Approach

In a scientist-practitioner approach to services delivery (described in Barlow, Hayes, & Nelson, 1984), the practitioner relies on research to guide assessment and intervention decisions, and intervention choices are treated as testable hypotheses. In this framework, all assessment is linked *directly* to intervention—assessment serves the purpose of gathering information to answer specific questions to inform intervention choices. Interventions are selected to reflect the most supportable hypotheses and the best predictions regarding potential for success, based on prior research or founded in theoretical conceptions. Another important feature is that interventions, as testable hypotheses, must be systematically monitored to assess whether they produce desired outcomes. Thus, informed decision making, question-focused assessment, a rationale for intervention selection, and a reliance on systematic data collection to monitor intervention outcomes are central features of a problem-solving approach to intervention premised on a scientist-practitioner model.

Behavioral and Ecological Foundations

Although a generic problem-solving approach for addressing child-related problems is not linked solely to behavioral and ecological foundations, eco-behavioral approaches to assessment and intervention planning provide a strong, direct framework for problem solving (Gutkin, 1993). Eco-behavioral approaches stress the importance of:

1. Specifically defining and clarifying concerns

2. Analyzing contexts in which behaviors occur and variables that are hypothesized to affect, control, and reinforce the behavior

3. *Directly* (versus indirectly) assessing the behavior(s) of concern in relevant environments

4. Intervening directly and in relevant environments

5. Directly assessing intervention outcomes

This eco-behavioral approach to problem solving and intervention design can be contrasted with, for example, a diagnostic-prescriptive approach focused on assessing to determine a diagnostic label or category (e.g., learning disability, attention deficit disorder) that leads to general intervention recommendations presumed to be related to the category/label. In contrast, an eco-behavioral approach focuses on *specific* behaviors, skills, deficits, excesses, and environmental supports needed to enhance skills and support desired behaviors and performance. Obviously, eco-behavioral approaches include an examination of the *context* in which behavior or learning occurs. Thus, an ecological approach moves away from a primary emphasis on a conception of a problem as child focused and toward an understanding of a behavior or situation in its context. Major features of an eco-behavioral approach are described in more detail in Conoley and Haynes (1992), Gutkin (1993), and Knutson and Shinn (1991).

Consultation

Consultation has long been promoted as a way to organize service delivery and to assist teachers and parents to develop interventions for children. The consultation literature includes descriptions of several consultation models (e.g., behavioral consultation: Bergan & Kratochwill (1990); mental health consultation: Caplan & Caplan (1999); collaborative consultation: Conoley & Conoley (1992), Idol & West (1987); collaborative eco-behavioral problem-solving–based consultation: Gutkin & Curtis (1999)). However, to a large extent, as described in major consultation texts (e.g., Brown, Pryzwansky, & Schulte, 2000), these various approaches for organizing and describing consultation share some common characteristics. All emphasize, to some extent, relationship building and interpersonal variables, including developing a collaborative relationship. All also use a systematic approach to problem solving that involves the basic steps of problem identification, analysis of relevant features affecting the problem situation, intervention planning and development, and evaluation of progress toward desired outcomes.

Although the consultation literature was used heavily for the framework for this chapter, we have come to prefer the term *collaborative problem solving* to consultation for school practice, because the term:

1. Is more descriptive of what actually occurs in the consultative process
2. Emphasizes the collaborative nature of the problem solving across all phases
3. Avoids some terms used in the consultation literature (e.g., consultant, consultee) that by their very nature seem to imply an expert/recipient model, with the consultant being the expert and the teacher or parent being the more passive recipient of the process

In collaborative problem solving as described here, all participants engage actively in all phases of the process, in differing yet vital roles that are discussed in more detail in the following section on collaboration and throughout the description of problem-solving steps.

ASSUMPTIONS UNDERLYING PROBLEM-SOLVING APPROACH

Careful consideration of the features of a collaborative problem-solving approach to intervention design reveals some key operating assumptions that underlie this approach, both in theory and in practice. Understanding and adopting these assumptions are essential to effective implementation of the approach.

All Children Can and Will Learn

Asserted as a guiding principle of the National Association of School Psychologists' review of policy and practices regarding assessment and eligibility in special education is the premise that "all children can learn" (National Association of School Psychologists, 1994, p. 2). Some children learn faster or slower, and some learn best differently than others. However, an important belief is *all* children have the potential to learn. Further, federal legislation dictates that all children have a right to a free and appropriate education regardless of categorical label. As a result, it is incumbent upon education systems and school professionals to deliver services that are *responsive* to the needs of all children—with and without disabilities or any other education or behavior support need.

The primary implication of this assumption for a problem-solving approach is that it becomes the *task of problem solving* and the *responsibility of the problem solvers* to discover the right *conditions* (e.g., instructional strategies, supports) that will enable children to learn. In this view, identification of a deficit or a need is only the first step in problem solving, not a goal in itself. Relatedly, by emphasizing conditions for learning, the focus is not only on child skills and needs but on environmental *supports* required to meet those needs. Thus, problem-solving steps aim to promote understanding of behavior and learning in context and focus on *what can be changed* (i.e., interventions) to improve child outcomes.

Collaboration as a Foundation

Collaboration, meaning the working relationships among participants in problem solving, provides the means for implementing a problem-solving approach in schools. Participants typically include the classroom teacher(s) responsible for the student, parent(s) of the student (the term parent refers to any family member or guardian responsible for the child), and school psychologist and other school personnel. The concept of collaboration is well founded across many literatures (e.g., Dunst, Trivette, & Deal, 1988; Friend

& Cook, 2000; Gutkin & Curtis, 1999; Pugach & Johnson, 1995) and has been the topic of definitional discussion in the school psychology literature (e.g., Erchul, 1999; Gutkin, 1999a, 1999b). In use here, collaboration refers to the nature of the working relationship between participants. Collaboration begins with assumption that all stakeholders are *valued participants*, with differing but equally important contributions, roles, tasks, and expertise. Importantly, in a collaborative process, there is no one "expert"; all participants are seen as having expertise and important contributions. This definition is consistent with the emphasis on collaboration pervading IDEA 97, in which parents and general education teachers are highlighted as key participants in all aspects of planning and decision making.

The collaborative relationship in problem solving is operationally defined by specifying the nature of the relationships (e.g., willingness to participate, shared responsibility for problem resolution and for completion of tasks), roles (e.g., contributions to the problem-solving process), and the methods of interacting and communicating (e.g., shared understanding of the decision making process to be used, mutual goals, clear roles, and responsibilities). In our approach to collaborative problem solving, all participants are actively and meaningfully involved in *all steps* and decisions, and the process itself (problem solving) is made overt so that all participants can understand and contribute to decisions. How collaboration comes in to play at each step is highlighted in the discussion of the problem-solving steps.

Problem *Solving*, not Problem Finding, Sorting, Labeling, or Admiring

All too often the process of trying to help children with academic or behavioral needs gets stalled at the point of describing what is wrong with the current situation, or "admiring the problem," rather than refocusing efforts on what can be done to improve the situation. Considerable time and energy of all participants (teachers, parents, school psychologists) often is devoted to assessing and diagnosing a problem for the purpose of a determining a categorical label. When the focus is shifted to problem *solving*, very specific steps are used to identify and provide the support, strategies, services, and/or accommodations needed to resolve the current problem situation, and an emphasis is placed on finding solutions (strategies) instead of staying focused on problems. Implicit within this problem-solving assumption is that all assessment or data gathering activities must be *directly* linked to intervention planning (consistent with IDEA 97). Thus, assessment becomes very focused, individualized to the situation, and intervention-driven, in contrast with a typical "assessment battery" approach. Problem solving seeks to design situation-specific strategies for situation-specific needs.

IMPLEMENTING COLLABORATIVE PROBLEM SOLVING

System-Wide Support for Implementation

Although a detailed discussion is beyond the scope of this chapter, it is important to recognize the critical need to establish system-level conditions and support for implementation of collaborative problem solving. Both use of the process and implementation of interventions are influenced by system-level variables such as policies, services delivery, and training that provide the conditions for collaborative problem solving at the school or district level (Rosenfield & Gravois, 1996). System-wide implementation of collaborative problem solving can be maintained only when there are sufficient resources and incentives for staff to effectively engage in the problem-solving process and implement intervention plans, and critical among these is time for collaboration. Collaborative problem solving is more effective when used consistently as the basis by which a school or district addresses the needs of students, rather than in isolated situations or by only some staff.

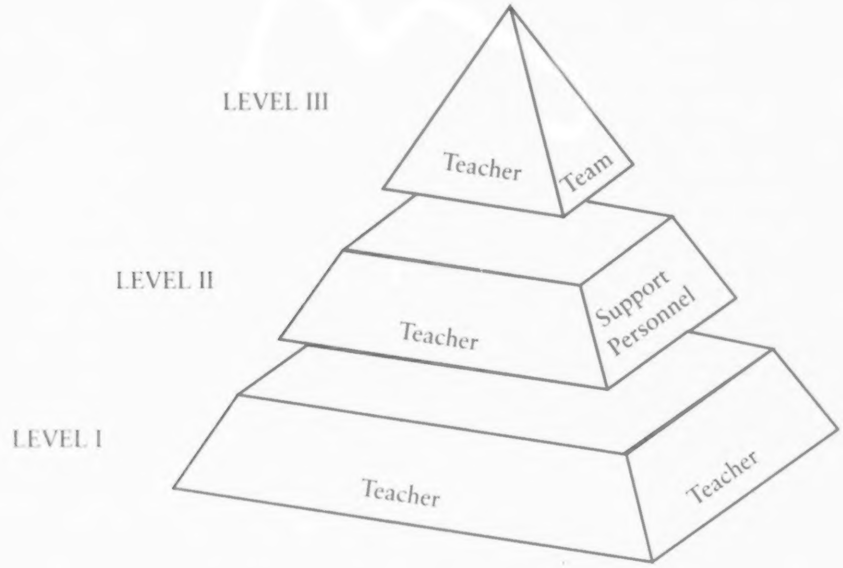
Multi-Level Service Delivery System

Reflecting the need for and availability of support, efforts to intervene with student-related problem situations can occur at different levels within a school. Curtis, Curtis,and Graden (1988) provided a framework for conceptualizing implementation of the collaborative problem-solving process within a multi-level approach for intervention assistance resembling a pyramid (see Figure 1).

PERSONAL PROBLEM SOLVING

"Personal" problem solving refers to the point at which teachers, without seeking help of other collab-

Figure 1. Collaborative problem solving as a multi-level service delivery system



LEVEL III	Group Problem Solving
LEVEL II	Individual Consultation
LEVEL I	Personal Problem Solving

Note. From Curtis, M. J., Curtis, V. A., & Graden, J. L. (1988). Prevention and early intervention through intervention assistance programs. *School Psychology International*, 9, 257–264. Copyright 1988 by Sage. Reprinted by permission.

orators, attempt to intervene with student-related problem situations through their own problem-solving efforts. Teachers might modify instructional practices based on their own knowledge and expertise, and may discuss concerns and involve parents (and students, as appropriate) in their effort to address student needs by making changes within the classroom and/or at home. Beyond this, teachers may engage in informal problem solving with a colleague. In recognition of this fact, the first level of service delivery depicted on the pyramid involves classroom teachers collaborating in problem solving with other teacher(s). At this level, problem-solving steps and activities (e.g., delineating plans, monitoring changes) tend to naturally evolve from teachers' knowledge of strategies and the process is more informal and less intrusive. Ideally, when all levels of intervention assistance are fully implemented, this level is supported through teacher training in problem solving and providing time for collaboration.

ONE-TO-ONE PROBLEM SOLVING

At the next level of intervention assistance, classroom teachers and parents (with student input and/or participation) engage in collaborative problem solving through one-to-one consultation with education support personnel (e.g., school psychologist, speech pathologist, reading teacher, counselor) based on the knowledge and expertise each can contribute to addressing a problem situation. By using a more systematic approach, participants adhere to a more structured problem-solving process. Additionally, documentation of the process followed is more carefully recorded as evidence of decisions made and outcomes obtained. For example, Curtis et al. (1988) recommended that specific intervention plans be recorded and outcome data be monitored.

GROUP PROBLEM SOLVING

Within this multi-level intervention assistance system, the highest level is represented by team-based problem solving. The composition and function of the team should vary based on the specific expertise needed for the situation. There are various approaches for implementing this team-based model for collaboration described in more detail in Rosenfield and Gravois (1996), Shrag and Henderson (1996), and Zins, Curtis, Graden, and Ponti (1988). Certainly group problem solving is the most costly configuration of these service delivery options in terms of personnel time and resources and, therefore, is best used only to address the most complex and difficult situations. Readers are referred to other chapters in this book for discussion of operating pre-referral or intervention assistance teams.

BEST PRACTICES/ PROBLEM-SOLVING STEPS

Although the literature includes descriptions of many different models of problem solving, all use the same basic phases. For the purposes of this discussion the four-step model of problem solving outlined by Bergan (1977) and Bergan and Kratochwill (1990) will be used, including problem identification, problem analysis, plan development and implementation, and plan evaluation. Also, to at least some extent, all approaches to consultative problem solving emphasize the importance of developing a collaborative relationship among participants. We believe it is vitally important to collaborate meaningfully with teachers, parents, and students in problem solving, so we will highlight the importance of collaboration both in terms of establishing a relationship prior to beginning the process and the nature of the working relationship among participants at each step in problem solving.

The following discussion is intended to provide a clear understanding of the sequence and type of decisions problem solvers must make when presented with a student who is not meeting expectations. The *decisions* that need to be made are the same for students experiencing academic or behavioral problems, with and without disabilities. For each step in the problem-solving process, we highlight the *questions* to be answered, the *tasks* to be completed in order to answer these questions, some *methods* for accomplishing the tasks, the *outcomes* of the step, and some of the *common pitfalls* that occur. Links between assessment and intervention are delineated as the implications of decisions made at each step of problem solving are used to inform the subsequent steps. That is, the design, implementation, and evaluation of interventions aimed at resolving problem situations are determined from a clear understanding of the problem situation and factors related to its occurrence.

Establishing a Collaborative Relationship: How Will We Work Together?

Although not formally recognized within systematic problem solving, "Step 0" refers to the step *before* the first step of problem solving (T. B. Gutkin, personal communication, September, 18, 2000), or the work of establishing the collaborative relationship among participants that will provide the foundation for the following steps. The primary *question* to be addressed at this step of problem solving is, *How will we work together?* Specifically, what will be the nature of the working relationship among participants?

Both prerequisite for and underlying all remaining steps in the process, Step 0 involves the following *tasks*: establishing and maintaining rapport among participants, formulating a sense of trust and respect among participants, and clarifying expectations for participation, including roles and responsibilities of problem solvers, shared accountability, legal and ethical guidelines, preferred means of communication, and so forth. Additionally, it is helpful to establish among participants a shared understanding of the problem-solving process that will be used to guide decision making, including the objective, tasks, and outcomes of each problem-solving step.

Methods used at this step of problem solving are grounded in effective communication and basic helping skills (e.g., active listening, empathy, paraphrasing), but largely depend upon the circumstances under which problem solving is initiated. For example, the approaches used to address a highly emotional situation may differ from those employed when a calm and rational mind-set prevails among participants. Additionally, the strategies used to build rapport and establish clear communication differ among participants who have worked together previously and those working together for the first time.

Both prior to beginning and throughout problem solving, overt references to the problem-solving process can facilitate participants' understanding of decision making and enhance outcomes. For example, Cleven and Gutkin (1988) found that consultation interactions with cognitive modeling resulted in improved participant understanding of and ability to use problem-solving processes to address concerns regarding individual students. They suggested helping collaborators develop problem-solving skills by providing participants a cognitive road map of the problem-solving process to make the process overt.

The *outcome* of Step 0 is the establishment of a strong relationship among participants that supports ongoing collaborative problem solving efforts. Before proceeding, several necessary conditions for collaboration should be evident, including a sense of mutual trust and respect for other participants, a willingness to commit time and energy to the process being initiated, and some shared understanding of the work to follow. Last, a calm, rational composure must prevail among participants such that they are ready to move beyond "problem admiration" and undertake the work of problem *solving*.

Common pitfalls associated with Step 0 result from a tendency to rush certain steps or decisions. That is, participants sometimes seek solutions by either grabbing onto the first solution that comes to mind or offering suggestions and advice prematurely. Someone may assume or be assigned the role of "the expert" to which the others look for answers. Furthermore, sometimes the problem-solving process remains stalled as participants spend undue amounts of time and energy "admiring" the problem and/or identifying barriers to addressing it. Finally, a common pitfall of Step 0 is that participants begin their work without a clear or shared understanding of the goals, the roles and responsibilities of participants (including their own), or the collaborative problem-solving process itself. If the important work of Step 0 is not completed adequately, the hard work of problem solving that follows is likely to become much more difficult.

Problem Identification: What is the Problem?

The objective of the first phase of problem solving is specific problem identification to define and clarify concerns and targets for change. Premised on the assumption that the problem is situation-centered within an educational environment, the intent of this initial phase of problem solving is to clearly identify the discrepancy between expected and actual performance in a particular setting. Specifically, the problem is defined based on the mismatch between what is expected of the student to be successful in the environment and the student's current level of performance.

Questions to be answered at this phase include: *What is the problem?* Specifically, what does the student do (or not do) that has caused someone to perceive a problem? In defining and clarifying the problem to systematically include environmental factors, the question is broadened to: *What is the problem situation?* For example, a student does not complete assigned written work during independent work time, or a student hits other children when she does not receive an item requested. Rather than identifying problems in general terms such as a student is "unmotivated" or "learning disabled," it is necessary to ask what the student does (or does not do) specifically that are *indicators* of the more general concern. For example, an indicator of "unmotivated" may be an extremely low level of work completion, and an indicator of a learning problem may be poor reading fluency.

To specifically identify the concern, a number of *tasks* need to be accomplished during this phase of problem solving. Conceptualized as a funnel, the problem-identification process should begin from a broad base to identify all concerns, assets, and other related factors regarding a problem situation. First, problems may be described in general, global terms. As the funnel narrows, however, the problem(s) being identified also must be defined and clarified in more specific terms. For example, because problem situations often are complex in nature, it may be necessary to break the problem into component parts and to prioritize or logically group them either in terms of importance (e.g., most critical based on immediate needs), constellation or class of behavior (e.g., combining hitting, kicking, and breaking objects into a category of "destructive behavior"), or sequence (e.g., short term versus long term or prerequisite versus required skills).

When multiple concerns exist, one helpful approach to the determination of priority issues is the evaluation of keystone variables (Barnett, Bell, & Carey, 1999). Being "the one on which all others appear to depend" (p. 31), a keystone variable or behavior refers to those that, if changed, are likely to positively impact the largest set of other significant behaviors, perceptions or problem situations (Evans & Meyer, 1985). Examples of likely keystone behaviors for behavioral concerns include prerequisite communication skills, prerequisite social skills, compliance, and self-regulated behavior (i.e., being able to observe one's own behavior, make judgments regarding one's performance, and react). For academic concerns, examples of likely keystone behaviors include prerequisite reading skills and attendance. Given that successful interventions result in both beneficial effects *and* side effects (Barnett et al., 1999), identifying and addressing keystone variables may provide the most efficient means to achieve long-term resolution of problem situations. In determining targets for change, the following elements of keystone behaviors should be considered: (a) prerequisite skills or pivotal behaviors that can positively influence other important behaviors, (b) targets for change that will have maximum positive collateral effects, and (c) foundation skills needed for subsequent adapting to natural environments (Barnett et al., 1999).

Therefore, beginning with top priority concerns, specific target behaviors need to be defined for each. Each problem situation should be stated in concrete, behavioral terms that can be both observed and measured. In fact, research (Bergan & Tombari, 1976) has shown that, when problem situations were defined in observable and measurable terms, the probability of successful problem resolution was significantly higher. Conversely, when a medical model label or internal child attribution or explanation of behavior was introduced (e.g., child has ADHD), teachers take less responsibility for problem resolution and, overall, problem-solving efforts were less successful (Tombari & Bergan, 1978).

Whenever possible, specific target behaviors should be identified and defined in terms of positive replacement behaviors. That is, target behaviors should specify a positive or desired behavior to be increased rather than an undesired or inappropriate behavior to be decreased. Consideration should be given to a positive behavior goal for the student and the target for change stated as that desired behavior using observable and measurable terms.

Last, in addition to being representative of the problem area, specific target behaviors also should be socially valid and meaningful. That is, if these behaviors were changed, the expressed concerns would be alleviated. And, of course, the specific behavior(s) targeted for change must be alterable by and within the setting(s) of those participating in problem solving.

As a result of these considerations, the input of person(s) from the student's natural setting is critical at this and each of the remaining steps of problem solving.

Incorporated in all phases of collaborative problem solving, assessment may not be extensive during this phase but it does begin during problem identification. Because the concerns identified at this initial step of problem solving represent what is perceived to be the problem and what must be changed if intervention is to be regarded as successful, assessment may be used to gather information needed to define and clarify a student's current performance or skills, as well as to identify positive replacement behaviors. Current levels of behavior need to be measured and documented for all target behaviors. Baseline data are used to document that a problem situation exists by determining the discrepancy between current and expected levels of performance and, later, to provide a benchmark against which to judge the effectiveness of interventions. Particular *methods* of assessment that may used during problem identification include interviews with teacher, parent(s), and/or student, review of teacher records, review of work samples, direct observation, behavioral ratings, or curriculum-based assessment. Finally, the *outcome* of this step is specific delineation of the problem situation in terms of target behavior(s) and replacement behavior(s). Baseline data are collected to document current levels of performance on each and the mismatch between current and expected behavior.

Throughout problem identification, *collaboration* occurs among problem solvers as they elicit or provide information to clarify specific concerns and goals. In the role of consultant, one has the responsibility to facilitate the problem-solving process and completion of the steps. Additionally, consultants share openly their knowledge and expertise in related content areas to support the problem-solving process and guide good decision making. In fact, given that participation in problem solving is based on the knowledge and expertise that each can contribute, it is incumbent upon all participants to share the information they bring and to provide input throughout the process. That is, both educational support personnel and those directly involved in the problem situation such as the teacher, parent(s) and student have important information to share. Likewise, it is critical that all participants are given the opportunity to provide input to decision making and that, when they do, the information shared is valued and carefully considered.

In terms of decision making, the person(s) presenting the concern ultimately determines what problems are priorities and what targets to include. The consultant helps define and prioritize concerns and, as a collaborator, may provide another perspective that helps inform the decision. Thus, the primary ownership for defining the situation of concern rests with the person(s) experiencing the problem situation (e.g., the teacher, parent(s), and/or student). The likelihood that problem solving will be successful is increased when these participants are able to make fully informed decisions at each step of the process based on both their own knowledge and the expertise others have shared.

Common pitfalls in problem identification often are associated with a tendency to rush the process; that is, moving to other problem-solving steps before the problem situation is clearly and adequately understood. For example, participants sometimes begin problem solving around the first concern mentioned without exploring all concerns and deciding on the top priority problem situation. Relatedly, participants sometimes analyze in detail each concern as it is mentioned without having first identified and prioritized all concerns. The result is inefficient use of time and side-tracking of top priority concerns. Another common pitfall associated with problem identification is the tendency to move forward with vaguely defined concerns before target behaviors are operationally defined in clear, observable, and measurable terms. Rather, problem situations sometimes are identified using child deficit or diagnostic labels (e.g., ADHD, oppositional) or terms that remain vague and too global (e.g., unmotivated, reading problem). Furthermore, sometimes the behavior(s) targeted for change are not alterable. Finally, a common pitfall at this step is that one person decides on the top priority concern, target(s) for change, and/or replacement behavior(s) while others do not agree with or even know of the decision. This especially is a problem when someone other than those responsible for implementation makes a unilateral decision.

Problem Analysis: Why is the Problem Situation Occurring?

Determining why the problem situation occurs corresponds to the second step of problem solving: problem analysis. In answering questions about why a student does not meet expectations, the objectives are to understand the behavior in context (i.e., in the natural setting) and form a hypothesis about why the problem situation is occurring so that an appropriate intervention can be developed. If the interventions developed later are to match the bases of the problem, then the decisions made here obviously are important. The selection, use, and interpretation of assessment tools is critical in determining the validity and reliability of information derived from the problem-analysis phase of problem solving. The focus of our approach to problem analysis, consistent with IDEA 97, is on *direct* assessment of variables that help guide intervention design. That is, information is collected to answer specific questions in a direct and parsimonious manner. Assessment that does not have direct implications for intervention design is not used. Likewise, assessment need not be exhaustive. Rather, data should be collected using a process that is efficient and incrementally valid, with sufficient assessment data collected to make good decisions. Careful consideration must be given to both the type and amount of information needed to support problem analysis.

The processes of problem solving in general, and problem analysis in particular, are not necessarily linked to any theoretical orientation. Problem solving does provide a systematic process for addressing problem situations; however, the application of this framework can be useful in guiding service delivery premised on various theoretical models. Neither the process, the questions to be answered, nor the tasks that need to be accomplished at each step in the problem-solving process change according to one's theoretical orientation. However, the hypotheses and the answers that result will be different depending upon the theoretical orientation of problem solvers due to the way each conceptualizes the issues, gathers information, and interprets the information gathered. Given that we endorse an eco-behavioral orientation, our conceptualization of a problem situation and the factors causing it are not limited to sole focus on child variables. Rather, our analysis of the causes of the problem situation includes consideration of the skills and behavior of the student, teacher, and the environmental context (i.e., natural setting) in which the problem situation occurs.

The *questions* to be answered during problem analysis include: *Why does this problem situation occur? What factors contribute to the mismatch that exists between actual and desired levels of performance for each target behavior? What resources are available to help resolve this problem situation? What is the goal or expected outcome of intervention?* That is, what is the desired level of performance for each target behavior?

In order to answer these questions, all relevant factors related to the problem situation need to be analyzed—both those factors serving as obstacles inhibiting desired performance and those which might serve as supportive factors or resources in resolving the problem situation. In particular, attention should be given to variables that are directly relevant to the problem situation and alterable, and, therefore, possible areas for intervention planning. Certainly student variables related to performance would be considered; however, ecological variables that may affect target behavior also must be examined. Specifically, problem analysis for intervention design should include examination of natural setting variables (e.g., physical arrangement of classroom, proximity), instructional variables (e.g., patterns and routines), teaching strategies (e.g., specificity or frequency of directions given, feedback, task demands), and peer behaviors (e.g., interactions, supports). Complete descriptions of behavioral approaches to problem analysis can be found in sources devoted to elaborating these procedures (e.g.,, Daly, Witt, Martens, & Dool, 1997; Lentz & Shapiro, 1986; Martin & Pear, 1998; O'Neill et al., 1997; Shapiro, 1996; Tilly et al., 1998).

There are several general *considerations and tasks* for assessment at this step of problem solving. First, the situational context in which problems occur should be carefully assessed. For example, a functional analysis of the problem situation could be conducted to examine antecedents, behaviors, and consequences in relation to target behaviors for both actual and desired or replacement behaviors. Second, it is helpful to examine exceptions to the problem situation; that is, what are the environmental conditions when the target behavior does not occur or when desired behavior increases? Particular note should be made of conditions that can be altered as they may be useful variables for change in intervention design. Also as part of problem analysis, the mismatch between actual and desired behavior is analyzed to determine whether this problem situation represents a skill or performance deficit. That is, evidence would be examined to determine whether the student has not learned the skills required for the task, whether the student has the skills required but does not perform them, or both. Finally, resources or factors that are supportive of resolving the problem situation should be identified.

In general, the goal of problem analysis is to determine a functional relationship between student behavior and the conditions and circumstances under which the student is more and less likely to engage in the problem behavior within this environmental context (Greenwood, Carta, & Atwater, 1991). There are various types and approaches to assessment that might be used during the problem-analysis phase. Together participants must decide how best to answer the questions being asked about cause of the problem situation. As a rule, however, intervention-oriented assessment within a problem-solving framework is *direct* and *focused*, and includes multiple procedures and sources of information. That is, for the purposes of problem analysis, assessment should be conducted across multiple environments, multiple domains, and times, and use only relevant methods that inform intervention decision making. Examples of *methods* that are most directly useful for intervention purposes include systematic and directed observation, structured interviewing with those most familiar with the problem situation, functional behavioral analysis, curriculum-based assessment and measurement, behavioral rating scales, performance-based assessment, review of records, and review of permanent products such as work samples.

Last, *goals* should be generated as criteria for assessing intervention effect and stated in concrete, behavioral terms that are easy to measure. Specifically, what is the expected outcome of intervention? In order to meet expectations, what level of performance will the student need to do (or not do)? The target behaviors that will be increased and/or decreased and the desired level of performance should be clearly defined and agreed upon by all participants.

Collaboration as a method underlies all that is accomplished at this step. All questions generated and data collected must be developed collaboratively and must serve the purpose of helping to develop interventions to improve the situation. From a collaborative perspective on problem analysis, the responsibility for all decisions about what data to collect, how to collect it, who will collect it, and how to use it are shared. For example, classroom observations occur when there is a mutually agreed upon decision that more specific data are needed on a variable such as time on task, number of interruptions, or triggers for disruptive behavior. Together participants decide what information is needed and how to collect it. Thus, observation data are collected to answer a specific intervention-related question, not to "verify" a teacher observation or as a routine component of problem analysis.

Determination of who will collect what information is made with input from all participants, not based on assumptions regarding the role or prescribed responsibilities of any member of the problem-solving team but rather on logical distribution of labor, access, and/or availability. Often it will be the teacher and/or parent (i.e., person(s) primarily responsible for intervening) who will have the most thorough understanding of the problem and natural setting and the best access to the information needed. It is reasonable that the teacher and/or parent also assume an active role in collection and/or analysis of relevant data. If assessment is seen primarily as the domain of an "outside expert" such as the school psychologist, then the teacher or parent cannot be an active partner in problem analysis and a valuable resource is lost.

Just as the consultant does not serve in an expert role of deciding what information needs to be collected and how it will be collected, nor does the consultant "own" the assessment information and its interpretation once it is collected. Rather, it is the responsibility of all participants to contribute to the determination of information needed, to the collection of data based on logical division of responsibilities, and finally the use of data in decision making.

From information generated during problem analysis, the *outcomes* of this step will be (a) identification of the discrepancy between actual (present level of performance) and desired levels for each target behavior, (b) specific outcome goal(s) for the intervention that will follow, and (c) sufficient understanding of the problem situation and contextual variables to decide on an intervention plan to improve the situation. That is, based on the results of problem analysis, a hypothesis about factors related to the problem situation is outlined such that the expected nature of the relationship between the target behavior and variable(s) contributing to it is clear. Additionally, a statement about the desired goal or outcome of intervention is written using observable and measurable terms. It sometimes is necessary to refine the target behavior as part of this process.

Perhaps the most *common pitfall* associated with this step of problem solving is that problem analysis often is skipped entirely as collaborators rush to solve the problem. That is, after discussion of the problem situation itself, intervention strategies are suggested. Other common pitfalls of problem analysis include collecting assessment data that do not inform intervention design, forming hypotheses without data and/or no link to the data collected during problem analysis, or forming hypotheses about factors that are internal to the child or not alterable. Last, participants sometimes fail to state the outcome goal(s) in observable and measurable terms or to clearly specify the level of performance desired, making it difficult later to evaluate the adequacy of progress toward goals and intervention efficacy.

Plan Implementation: What Are We Going to Do to Resolve the Current Problem Situation?

Once the problem situation is clearly identified and understood, the focus of the problem-solving process turns to the task of designing an intervention to resolve it. Related to the task of intervention design, the next problem-solving step can be divided into several phases, each with its own questions to be answered and tasks to be accomplished. Specifically, these phases include exploring possible intervention strategies, selecting intervention(s), clarifying intervention and progress monitoring plans, and implementing the chosen intervention(s).

EXPLORE POSSIBLE INTERVENTION STRATEGIES

In posing the questions, *What needs to be changed* and *How is that going to be done?* the first phase of intervention design aims to explore possible intervention strategies that could be tried to improve the problem situation. In so doing, the intent is to generate and explore a range of alternative strategies for consideration by the person(s) who will be responsible for implementing the intervention. However, rather than generating a list of all possible strategies, efforts are made to identify a list of viable and well-supported intervention strategies for consideration.

To be effective, interventions must be logically related to the identified problem and to the reasons that the problem situation exists. Therefore, the exploration and selection of intervention strategies is based on specific information derived from problem analysis. By discussing the factors that contribute to the mismatch between current and expected performance, problem-solving participants begin to identify strategies for intervention. Consideration is given both to changing relevant context variables within the environment and to changing relevant skills or behaviors of the student, teacher, and/or others.

From a scientist-practitioner perspective, consideration of possible intervention strategies should be guided by reliance on strategies supported by intervention research. Although interventions must be individualized to fit a particular situation, the literature on academic and behavioral interventions and effective classroom instruction and management can provide a pool of strategies that have demonstrated effectiveness for relevant problem situations.

Additionally, when identifying strategies, participants are encouraged to think creatively (e.g., use of peers, self-management, other adults) and beyond thinking of an intervention as a place (e.g., Title I, resource room). At the same time, it is important to explore interventions that are feasible in the given situation. That is, intervention strategies should consist of *actions* that participants can either prepare for or begin implementing tomorrow. Intervention planning focuses on *what* specifically will be done to address the problem situation.

Finally, all participants assume responsibility for contributing ideas and considering options so that the process remains collaborative. Instead of presenting "solutions" for approval, participants offer *ideas* for consideration. Each has the responsibility to contribute his or her knowledge and expertise so that together all participants can consider and evaluate alternatives. For example, the persons most familiar with the problem situation and natural setting will share ideas based on their familiarity and experience with both. School psychologists and other professionals with knowledge of empirically supported interventions in relevant content areas will share that expertise.

SELECT INTERVENTION STRATEGIES

From among the many alternatives considered, specific intervention strategies must be chosen and an intervention plan outlined. Answers generated to the questions posed in previous steps are used to respond to the *question* that must be answered at this phase in the problem-solving process: *What intervention(s) should be tried to improve the problem situation?*

With regard to the *task* of selecting intervention strategies, there are several important issues to be considered. First, consistent with the notion of collaboration, responsibility for selecting an intervention strategy must rest with the person(s) who eventually will implement it. Given the collaborative nature of the problem-solving process, all participants share responsibility for generating and evaluating possible intervention strategies. However, because the person(s) who are most directly involved in the problem situation assume primary responsibility for plan implementation, they are given final choice in the selection of intervention plans. Clearly, they are in the best position to evaluate their ability and willingness to implement a proposed intervention. Moreover, if an intervention is unacceptable to the person who is to implement it, it is unlikely that it will ever be implemented as intended.

Of course, an important consideration relative to the task of selecting intervention strategies is the likelihood of success in changing this problem situation. With this in mind, evaluation and selection of the strategies that will comprise an intervention plan should be based on and incorporate the elements of strong interventions (Lentz, Allen, & Ehrahrdt, 1996). Defined as the "weakest that works" (Yeaton & Sechrest, 1981), a strong intervention includes effective instructional practices such as modeling, practice and performance feedback, frequent opportunities for the student to respond and practice replacement behaviors, feedback about performance and progress toward goals, error correction procedures, and contingencies for accurate performance.

Additionally, the selection of intervention strategies includes consideration of the findings from problem analysis to determine what should be changed and what can be changed. With a focus on "alterable" variables, the selection of interventions should consider what are the most natural, least intrusive, and most effective strategies for accomplishing change. That is, to what extent do these strategies fit with current classroom routines and teaching practices? What is the least amount of effort needed to get the desired amount of change? What, if any, positive effects are likely to result for other students and the teacher? In judging the potential efficacy of an intervention plan, consideration also is given to issues of feasibility, including the availability of resources. In sum, for the purposes of intervention design, participants consider information gathered during earlier steps of problem solving and empirical data from intervention research as the basis for generating, evaluating, and selecting intervention strategies. Those selected are combined to outline a strong intervention plan.

CLARIFY INTERVENTION AND PROGRESS MONITORING PLANS

Once intervention strategies have been selected, it is important to clarify all aspects of the procedures. In particular, all participants should agree on a written action plan that specifies (a) every component of the intervention plan, including progress monitoring, (b) person(s) responsible for each component of the plan, (c) setting(s) where the intervention will be conducted, and (d) beginning and review dates. Simply stated, the action plan needs to answer the *question* of *How will the intervention occur to improve the problem situation?* by considering who will do what when, where, how, and for how long.

To aid with clarification of the intervention plan and ultimately with its implementation, steps should be delineated or "scripts" developed as procedural checklists outlining major components of the intervention. They serve a useful function in communicating to all participants what the intervention entails and the responsibilities of each person. During plan evaluation, scripts also will be used to evaluate and document that the intervention was effective, and/or make needed modifications. A script outlines in sequential order all major intervention components in either a table or list form. Steps should be specific, detailed, observable, and measurable such that someone else can implement them. In front of each component of the plan, space is provided and used to check off as it is completed; also, space is provided for the date of implementation to be written.

Also clearly outlined as a portion of the intervention plan are procedures and a schedule for monitoring progress toward goals. Specifically, participants need to answer the important *questions* of *How will we know that the intervention is working?* and *How will we show others that the intervention is working?* In addition to establishing a brief repeated measure to assess target behaviors, a progress monitoring plan must include a timeline for intervention, goals or criteria for performance, and measures of both intervention adherence and efficacy. In addition, participants should determine when progress will be monitored and intervention results graphed, and by whom. A decision-making system that allows for interventions to be changed when they do not produce the desired outcome should be specified a priori.

IMPLEMENT INTERVENTION PLAN

The primary responsibility for implementation of the chosen intervention plan is assumed by the individual(s) (e.g., teacher, parent) who spends the most time in the setting(s) where interventions are being implemented rather than by educational support personnel such as school psychologists. However, it is the responsibility of *all* participants during the implementation phase to provide ongoing support for the intervention plan and their collaborators. In our experience implementing collaborative problem solving in schools, collaboration is most evident when all of the individuals who helped to develop the intervention also have a role in its implementation. For example, the teacher could direct implementation of the instructional strategy; the school psychologist could help set up the data monitoring plan, direct data collection, and graph results; the student could chart and self-monitor goal attainment; and the parents could reinforce goal attainment through rewards at home. The *question* to be answered at this phase in the problem-solving process is: *How can we best support the intervention and the intervener(s) during implementation?*

In response to this question, the *tasks* to be accomplished include providing ongoing support and systematic follow-up with intervention implementation. For example, it is important to provide those participants directly involved with implementation with encouragement and positive feedback for their efforts. Additionally, support may be needed in gathering resources and collecting data. To ensure that interventions are being implemented as outlined, it may be necessary to support the intervention by trouble-shooting with the intervener(s), and providing technical assistance with intervention procedures and/or monitoring of intervention adherence.

Common pitfalls can be found at each phase of plan implementation. For example, when exploring possible interventions, the strategies considered may not relate to information derived from problem identification or problem analysis, or build on intervention research or empirical data. Likewise, interventions may be specified in terms of an existing program or a particular person or place, not as actions to be taken to address student needs. When selecting the strategies for intervention, one person may outline a plan and presents it to the others for their approval. Instead, problem solvers should consider the alternatives and collaboratively decide on a plan considering input and ideas from all participants, especially those who will be responsible for implementing them. With regard to clarifying plans, participants often fail to outline intervention plans in sufficient detail and in writing. Similarly, progress monitoring plans may not be clearly delineated and written. During implementation of the intervention plan, participants must take care to provide sufficient time for implementation and support for those who are responsible for implementing the intervention.

Plan Evaluation: Is the Intervention Plan Working or Does it Need to be Changed?

In the problem-solving approach, an intervention is treated as a testable hypothesis, not a known solution. As such, assessment is an ongoing process and progress toward attainment of desired outcomes is monitored continually. After giving interventions sufficient time to be implemented, participants evaluate data regarding target behaviors and make decisions regarding the adequacy of progress made toward each goal. In addition to judging the effectiveness of an intervention plan, participants also evaluate outcomes in terms of the acceptability of the plan to those most directly involved and the adherence of intervener(s) to the plan as outlined.

The principle *question* to be answered during plan evaluation is, *How well is the intervention working?* Depending upon the answer received, follow-up questions need to be asked. Specifically, if the goals of the intervention are met, the focus of questions that follow will address issues in maintenance and/or generalization. For example, *Is the problem resolved or is there a need to continue an intervention? How will the intervention be faded in order to maintain the improvement?* and *How can the intervention strategies be applied to other settings in which this problem occurs?* If intervention outcomes are not satisfactory, then it will be necessary to answer questions such as, *Is it certain that the intervention plan was implemented consistently as outlined?* and *What information was missed during problem analysis?*

To decide whether the intervention plan is working, problem solvers need to undertake several *tasks*. Specifically, the data collected through ongoing assessment need to be examined to determine if the progress toward meeting goals is adequate. Consideration is given to both the demonstrated effectiveness and acceptability of the intervention. In evaluating intervention outcomes, evidence of adherence to the intervention plan also must be examined. Participants need to determine if the intervention was consistently implemented as outlined, discuss any problems with or unusual occurrences during implementation, decide if more time is needed, and/or decide if any changes are needed.

Based on the evaluation of the adequacy of the current intervention strategies for meeting goals, problem solvers are left with one of several decisions to make. Specifically, if the intervention has been successful, it will be necessary to decide whether or not to (a) continue with the current intervention plan, (b) outline strategies to phase out the current intervention procedures, with consideration for generalizing to alternative settings or target behavior(s) or for maintenance within the natural setting, or (c) address the next goal.

However, if it is decided that the interventions have not been effective in producing the desired changes in the problem situation, it may be necessary to strategically return to an earlier step in the problem-solving process. If so, the tasks facing participants include reconsidering the questions addressed in earlier steps, such as target behaviors, situational variables contributing to the problem situation, or the nature of an intervention strategy. Alternatively, if the outcomes of an intervention plan are not effective, it may be necessary for participants to pursue more in-depth or extended problem solving. That is, it may be necessary to access additional resources and supports by taking the problem to a higher level on the continuum of service delivery options (e.g., request consultative assistance at group problem-solving level rather than at individual level).

Consistent with a problem-solving approach, progress toward desired outcomes is monitored through ongoing assessment. Data are used to determine whether interventions are working, whether goals are being met, or if the intervention plan needs to be changed. Based on the information derived from assessment data, all participants work cooperatively to evaluate outcomes, and decide if and how intervention plans may need to be modified in order to enhance progress. Having agreed during the initial stages about the definition of the problem situation and which behavior changes would indicate improvement, participants should find these questions easy to answer.

Common pitfalls at this step of problem solving occur when decisions are made without adequate data. For example, participants may evaluate the efficacy of an intervention without progress monitoring data or evidence that data were collected using technically adequate measures of target behaviors. Determination of intervention effectiveness may be considered without any evidence of adherence to the intervention plan. For example, participants may judge an intervention to be unsuccessful when, in fact, it was never actually implemented or was not consistently implemented as outlined. Finally, a common pitfall associated with plan evaluation is the failure of participants to plan for subsequent steps, including outlining specific action plans to address goals for generalization and maintenance.

Flexibility in Problem-Solving Sequence Implementation

Actual problem solving rarely proceeds in a sequence as orderly as described. Rather it often is necessary to move back and forth between steps or, sometimes, to strategically return to an earlier problem-solving step and re-work steps of the process as new information is gathered or communication among participants improves. Nevertheless, the model described provides a framework that may be used as a flexible guideline for ordering of steps, not as rigid sequence of events.

SUMMARY

Given our common interest in supporting and addressing the needs of students, it becomes incumbent upon us (e.g., school professionals, parents, community members) to work together to solve problems. Recognizing that each participant will make different contributions to the process, it is important to realize that each also enhances the probability of reaching an effective solution to a particular problem situation. For school psychologists, perhaps the most important contributions can be made through facilitating the process used to address student needs. Rather than directing our energy at producing the "right" answer, school psychologists can work to establish ongoing relationships with and among other concerned individuals. And, second, we have the expertise to guide the use of a framework that all participants can use in systematically addressing the problem situation. A collaborative problem-solving approach to intervention design provides a model that school psychologists can use effectively and efficiently to enhance student learning and behavior.

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Friend, M., & Cook, L. (2000). *Interactions: Collaboration skills for school professionals* (3rd ed.). New York: Longman.
With an emphasis on interpersonal interactions among individuals and groups, this practical volume provides a detailed overview of collaboration skills. Both collaboration contexts and interpersonal skills essential to effective consultative problem solving--listening, communicating, questioning, framing statements, and providing feedback—are covered in detail with practical application examples and practice activities for each. This book is an excellent introduction for educators without specific training in interpersonal aspects of collaboration and a useful refresher for experienced school psychologists regarding communication skills as applied to collaborative problem solving.

Kratochwill, T. R., & Bergan, J. R. (1990). *Behavioral consultation in applied settings: An individual guide*. New York: Plenum.
Intended to be a skill-training guidebook for practitioners interested in learning a behavioral consultation approach to the design and delivery of behavioral interventions in applied settings, this book can be used independently or as supplement to a text by the same authors (Bergan & Kratochwill, 1990) and/or supervised training in collaborative problem solving. Objectives and procedures are detailed for each of the four stages in the problem solving process, along with some sample interview formats. The content presented in each chapter is expanded with examples and discussion of transcripts from consultation interviews, discussion questions, and self-quizzes.

Rosenfield, S. A., & Gravois, T. A. (1996). *Instructional consultation teams: Collaborating for change*. New York: Guilford.
Bringing together literature on school consultation and school change, this book provides an essential resource for professionals seeking to implement more effective consultation-based services in schools and ensuring that the services become established functions of the school system. Written with the needs of practitioners in mind, this book details the process and describes the important features of the school-based Instructional Consultation Team, including methods and instruments for evaluating student progress and system functioning. Additionally, it also provides detailed, practical information on achieving systemic and lasting change in practice.

Shapiro, E. S. (1996). *Academic skills problems: Direct assessment and intervention* (2nd ed.). New York: Guilford.

Effective collaborative problem solving for the purpose of intervention design requires that problem solvers have a strong foundation in direct, intervention-oriented assessment, knowledge of effective classroom interventions, and skills to systematically plan and monitor assessment and interventions. This book is an excellent source of extensive, detailed information on each of these topics, with a particular emphasis on academic skills assessment and intervention. Practical guidelines, steps to follow in the process, and coverage of the knowledge base in several areas important to understanding classrooms (e.g., ecological assessment, interviewing frameworks for focusing on academic variables) are included. Helpful information is included on several specific assessment and data monitoring strategies, including curriculum-based assessment.

AUTHOR NOTES

The conceptualizations and examples found in this book have been shaped by the influence of many colleagues, and we want to gratefully acknowledge their contributions to our thinking. These individuals include our colleagues at the University of Cincinnati, David Barnett and F. Edward Lentz, as well as our many skilled students and graduates, whom we thank for their contributions to how we view problem solving. We also are indebted to the many educators and parents we have worked with in schools who continue to teach us about practical implementation of collaborative problem solving.

We attribute the phrase "admiring the problem" to James Ysseldyke, from whom we first heard this term several years ago. We believe it accurately captures the essence of many of the activities of multifactored evaluation teams that focus on finding and documenting student deficits, which Seymour Sarason has referred to previously as a "search for pathology."

39 Best Practices in School-Based Problem-Solving Consultation

Thomas R. Kratochwill and Stephen N. Elliott
University of Wisconsin-Madison
Karen Callan-Stoiber
University of Wisconsin-Milwaukee

OVERVIEW

Consultation continues to be a major approach for providing psychoeducational services to children and adolescents. In fact, recent reviews of consultation suggest that it is becoming recognized as the most preferred and satisfying function of school psychologists (Gutkin & Curtis, 1999; Sheridan & Walker, 1999; Sheridan, Welch, & Orme, 1996). Three major models of consultation that are used most frequently include mental health consultation, organizational development consultation, and behavioral consultation, but many more have been identified (see Zins, Kratochwill, & Elliott, 1993). Although differences exist among these models, all emphasize problem-solving expertise of the consultee within a triadic relationship (consultant-consultee-child). The behavioral model of consultation emerged as an alternative to traditional service delivery approaches in applied settings (Reschly, 1988), and traditionally has strong ties to behavioral theory (e.g., Bergan & Kratochwill, 1990). Nevertheless, the model has expanded, and new names have been invoked to describe the evolution in thinking (see Gutkin & Curtis, 1999; Stoiber & Kratochwill, in preparation). We are using the term "problem-solving consultation" to replace the earlier term "behavioral" used in the title of this chapter, but other terms could be used as well (e.g., solution-oriented, ecobehavioral).

We also want to emphasize that consultation is distinguished from the assessment and interventions that are used as part of the problem-solving process. While behavioral consultation traditionally has been affiliated with behavior modification and intervention techniques from this theoretical school, a more current focus of problem-solving consultation is to use a wide range of assessment and intervention technologies from diverse theoretical origins (see Gutkin & Curtis, 1999; Sheridan & Walker, 1999). For example, school psychologists may apply more traditional behavioral principles and techniques in developing intervention programs and use behavioral methodologies to evaluate the effectiveness of these services (see Martens, 1993). Likewise, school psychologists also may apply valid instructional principles such as pause time, pacing, teacher feedback, and/or homework instruction when developing an intervention plan to enhance the academic performance of underachieving students (Gettinger & Stoiber, 1999). Within a problem-solving consultative approach, consultants may draw upon prescriptive or directive approaches at some times and mediation-oriented approaches at other times (see Gutkin & Curtis, 1999; Stoiber & Kratochwill, in preparation). By using this framework, problem-solving consultation can be either directive or non-directive, depending upon the issue being addressed and other considerations (e.g., degree of coordination necessary to implement a plan, time available to facilitate skill development in consultees, need to promote the consultee as a valuable co-constructor of knowledge). Whereas specific intervention strategies may vary across presenting problems, two identifiable features are most frequently associated with problem-solving consultation, namely, indirect service delivery and a problem-solving approach.

The most widely recognized feature of consultation is its *indirect service* delivery approach (Bergan & Kratochwill, 1990; Sheridan & Walker, 1999). Services are delivered by a consultant (e.g., school psychologist) to a consultee (e.g., teacher or parent) who, in turn, provides services to a child in the school or community setting. The indirect approach to service delivery generally is regarded as a distinct advantage of consultation, since it allows the psychologist to affect many more children than could be served by a direct service approach. The centrality of consultation in linking assessment and intervention practices is making consultative models increasingly prominent as a component of solution-focused service delivery systems (Stoiber, Kratochwill, Vanderwood, & Potter, 2001).

Consultation involves a collaborative relationship in which the consultant is viewed as a facilitator. Emphasis is placed on the collaborative *problem-solving process*, which occurs during a series of interviews and related assessment activities. Throughout this process, the psychologist's role is to elicit a description of the problem, assist in analyzing the problem, co-construct a plan for intervention, and monitor the program once implemented. The teacher's or parent's role is to clearly describe the problem, work with the child to implement the intervention program, observe progress, periodically evaluate the plan's effectiveness, and supervise the child's actions (Elliott & Sheridan, 1992; Stoiber & Kratochwill, in preparation). For the consultation process to be effective, both consultant and consultee should bring the following dispositions to the consultation process: (a) a sense of preparedness and clear expectations, (b) a willingness to participate actively and openly, and (c) a capacity to assume a proactive role.

BASIC CONSIDERATIONS

Problem-solving consultation has two important goals: (a) to provide methods for changing a child's behavioral, academic, or social problem(s), and (b) to improve a consultee's skills so the consultee can prevent or respond effectively to future problems or similar problems in other children. Given these goals, consultation can be both a proactive and a reactive service. Researchers indicate that consultation-based interventions often have changed children's problem behaviors successfully (Gresham & Kendall, 1987; Sheridan et al., 1996). However, the proactive goal of influencing a teacher's or parent's ability to handle future problems has not been observed consistently. The accomplishment of these goals requires consultees to participate in a general process for analyzing problems, which results in an effective plan to resolve the problems. Successful consultants must demonstrate expertise in both coordinating and facilitating the problem-solving process and in implementing methods for monitoring whether the intervention is working. Although competence in problem identification and plan implementation are necessary conditions of problem-solving consultation, they are not sufficient to facilitate effective consultative interactions. Integration of positive interpersonal skills and understanding with technical expertise are equally important to maximize consultant-consultee effectiveness (Stoiber & Kratochwill, in preparation). For example, characteristics such as acceptance through nonjudgmental statements, openness, non-defensiveness, and flexibility positively affect the interaction between consultant and consultee. In the remainder of this chapter, the basic components of problem-solving consultation, specific consultant-consultee relationship variables that may influence the consultation process, and use of consultation with teachers and parents will be discussed.

Structure and Process of Consultation

Consultation has been conceptualized as a series of stages that structure and focus the problem-solving interaction between a consultant and consultee (Bergan & Kratochwill, 1990; Stoiber & Kratochwill, in preparation). A heuristic five-stage framework for consultation begins with *initiating a consulting relationship*, *problem identification*, and *problem analysis*, progresses to *plan implementation*, and concludes with *plan evaluation*.

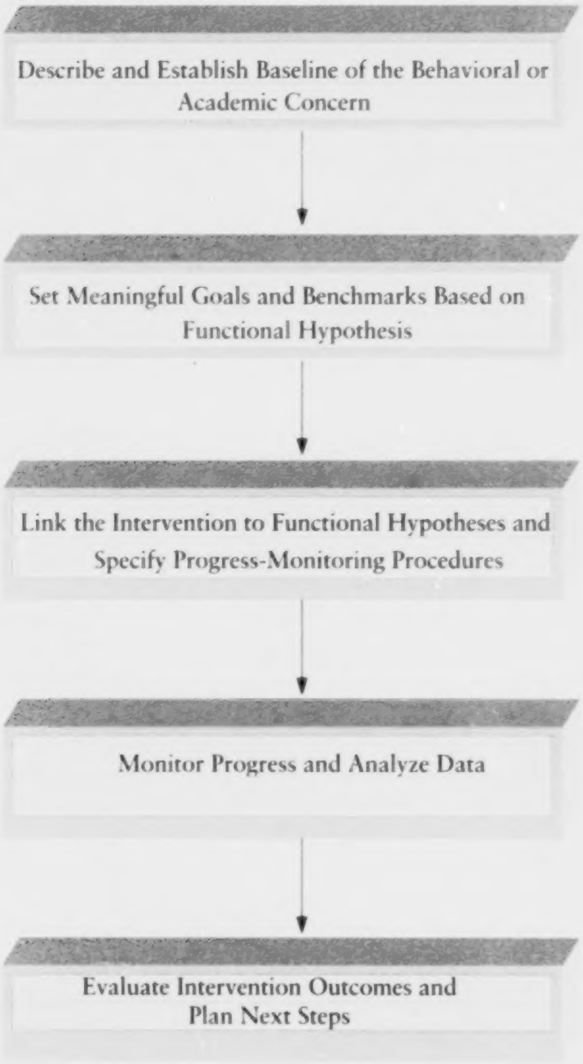
Consultation begins with the *development of a relationship* between the consultant and the consultee(s) (Stoiber & Kratochwill, in preparation). Collaborative consultants who develop positive working relationships with consultees may (a) experience less resistance to consultation process and intervention, (b) find their suggestions are readily accepted by consultees, (c) increase the probability that consultees will follow through on an intervention, and (d) increase the effectiveness of the consultation process for the consultee and client. During this stage, it is critical that the consultant and consultee have uncovered a shared need or goal to focus the consultation process and develop an intervention. It is also during this stage that the consultant discusses with the consultee the stages of the consultation process, consultant and consultee roles, and shared responsibilities and ownership of the consultation outcomes.

Problem identification is perhaps the most critical stage of consultation because it results in the design and implementation of an effective plan. Traditionally, in behavioral consultation the focus was exclusively on identification of a target problem and elimination of that problem. More recently, an emphasis has been placed on teaching social and academic competencies in addition to dealing with a target problem (DiPerna & Elliott, 2000; Stoiber & Kratochwill, 2000). The interview represents the primary assessment technology for defining the problem and developing an understanding of the needs in social and academic competencies, although numerous other strategies may assist in defining the problem or issue (e.g., tests, rating scales and checklists, functional assessment, direct observations). During the problem identification interview, the consultant and consultee focus on describing and operationally defining the child's behaviors that concern the parent/teacher. In consultation a "problem" is a relative concept that becomes operationalized when the parent and/or teacher report a significant discrepancy between the child's current and the desired levels of performance. The determination of whether a significant discrepancy exists is not examined initially; however, once the current and desired levels of performance are defined objectively, this significant discrepancy becomes the focus. This approach to problem identification is based on the assumption that problems are the result of unsuccessful or discrepant interactions between and among persons (e.g., child and teacher; child and parent; teacher, parent, and child). Functional assessment strategies may be conducted to focus attention on the academic and social competencies that need to be taught and on the ecological context surrounding the concern (Stoiber & Kratochwill, 2000). Thus, the psychologist and parent/teacher first analyze the target problem within the ecological context of the child and the child's interactions with the environment. When baseline data support the existence of the specific problem, the psychologist and parent/teacher begin to jointly identify variables that might lead to behavior change and problem resolution.

Problem analysis, the third major stage of consultation, focuses on the variables and conditions that are hypothesized to influence the child's prosocial and challenging behaviors. Problem analysis is a natural extension of the problem identification stage, in that it essentially begins with the challenging behaviors and prosocial competencies of concern and focuses on establishing functional relationships between it and the antecedent or consequent events. Figure 1 displays the steps from the Functional Assessment and Intervention System (Stoiber & Kratochwill, 2000) that features examples of functional assessment. Questions about who, what, where, when, and under what conditions or contingencies are all considered relevant, and generally facilitate a better understanding of the problem behavior. In many cases, the problem analysis stage will require the psychologist to collect additional data about the child's challenging behaviors and social competencies. Thus, problem analysis may enhance refinement and, consequently, redefinition of the problem and the factor(s) that influence it.

Plan implementation follows the problem analysis stage and has dual objectives of (a) selecting an appropriate intervention and (b) implementing the intervention. Procedural details are essential at this stage, such as assigning individuals to various roles, gathering or preparing specific materials, or training individuals to implement the plan. The selection of interventions traditionally seems to have been based on the reported or assumed effectiveness of a particular method. The design and selection of appropriate interventions should be based on empirically supportable interventions and requires attention to issues of intervention acceptability, effectiveness, and consultee skills and resources (Kratochwill & Stoiber, 2000; Stoiber & Kratochwill, 2000). Many consumers and providers of psychological services are also demanding that interventions also be acceptable (i.e., time efficient, least restrictive, fair, and/or low risk to the child) (Elliott, 1988a, 1988b). Likewise, interest in inter-

Figure 1. Steps from the functional assessment and intervention system


Describe and Establish Baseline of the Behavioral or Academic Concern
Set Meaningful Goals and Benchmarks Based on Functional Hypothesis
Link the Intervention to Functional Hypotheses and Specify Progress-Monitoring Procedures
Monitor Progress and Analyze Data
Evaluate Intervention Outcomes and Plan Next Steps

ventions that are consistent with the teacher's/parent's child management philosophy and compatible with existing resources and skills of the individual delivering the intervention have also gained recent consumer interest and empirical support (Witt & Martens, 1988). Plan implementation also involves discussing and actually carrying out the selected intervention. This substage may consume several weeks and is characterized by interactions between the parent/teacher and child. These interactions may occur through brief contacts in which the psychologist monitors intervention integrity and side effects (Gresham, 1989), and possibly brainstorms with the parent/teacher ways to revise the plan and its use. DiPerna and Elliott (2000) recently developed a series of Intervention Record forms for teachers, parents, and students. These Intervention Records are based on the effective teaching literature and provide respondents opportunities to indicate *How helpful?* and *How feasible?* and specific intervention tactics that are likely to be used with a given student. These intervention record forms are an example of trying to enhance the likelihood that the interventions selected are acceptable and will be able to be implemented by a consultee. The psychologist's role may also involve observations to monitor child and consultee behaviors or training sessions to enhance the skills of the individual who is executing the intervention plan.

Plan evaluation is the final stage of consultation with the objective of establishing a sound basis for interpreting outcomes of the intervention for the targeted problem and social competencies, and providing a forum for evaluating plan effectiveness. The rigor of evaluation involved in research may not be used consistently in practice, but good evidence to verify outcomes should be routine in case consultation efforts. Single-case study strategies provide one means for evaluating change in the child's progress (Kratochwill, 1985). When the reported discrepancy between the child's behavior and desired level of functioning is reduced significantly or eliminated, academic and/or social competencies have been acquired, and the intervention is acceptable to both the teacher/parent and the child, the consultant and consultee decide whether consultation should be terminated. Outcome criteria should include maintenance of the desired behavior over time and generalization across multiple settings and conditions. In theory, a consultative case is not concluded until the discrepancy between the child's existing and desired behavior is reduced substantively and an acceptable maintenance plan is in place. Criteria such as overall improvement in the quality of life (social and academic) can also be invoked but may require a developmental focus in consultation. Therefore, it is often necessary to recycle through previous stages of consultation and re-evaluate refined or newly implemented interventions.

In summary, problem-solving consultation is a model for delivering assessment and intervention services to children via teachers or parents through a series of structured meetings. A heuristic problem-solving framework provides structure for collecting information and affecting behavior change. Although the problem-solving structure is sequential and overt, it should not be interpreted as inflexible or irreversible. The activities of consultants and consultees are multifaceted, involving at least interviews, functional assessments, selection and implementation of interventions, and evaluation of the interventions. Such activities generally require several interactions between the consultant and consultee, as well as ongoing consultee and client collaborative interactions.

BEST PRACTICES IN THE DELIVERY OF PROBLEM-SOLVING CONSULTATION

As noted in the previous sections of the chapter, problem-solving consultation consists of a series of stages or phases that are used to implement the process of consultation. Each of these steps, with the exception of plan implementation, involves a formal interview with specific objectives to accomplish. Best practices in problem-solving consultation suggest that psychologists adhere to specific objectives and activities within each phase. The major components for each of these phases are outlined next.

Stage 1: Establishing a Consultant-Consultee Relationship

The interpersonal relationship between a psychologist and parent/teacher is assumed to play a major role in the use and effectiveness of consultation. Thus, as with psychotherapy, issues of trust, genuineness, and openness have been deemed important qualities for both consultants and consultees (Gutkin & Curtis, 1999; Martin, 1978). These human qualities are magnified in a consultative model of service delivery due to the predominance of an interview mode of information gathering and sharing. The dynamics of communication, both talking and listening, are the medium through which psychologists display their attitudes about parents and teachers. Personal characteristics, professional competencies, and modeling all are important elements in establishing and maintaining constructive and professional interactions.

Sensitivity to issues of importance to parents and teachers also contributes to the development of a positive consulting relationship. Variables commonly examined in intervention acceptability research (e.g., Elliott, 1988a; Witt & Elliott, 1985) and dimensions of helping emphasized by empowerment theorists (e.g., Dunst & Trivette, 1988; Witt & Martens, 1988) provide variables to consider consistent with consultation that are relevant to the enhancement of relationships with parents and teachers. For example, acceptability researchers repeatedly have found that administration/management time and fairness of the intervention are important themes virtually to all teachers, and non-aversive approaches to intervention are valued highly by most teachers. Work by empowerment theorists applied to consultation suggests that (a) help is more likely to be perceived positively if it is offered proactively, (b) competence within teachers is best promoted by building upon their existing child management strengths rather than remediating deficits, and (c) use of existing resources in the school environment is preferred over the intervention or purchase of new resources (Witt & Martens, 1988). Thus, it is concluded that effective consultants (a) overtly communicate awareness of these issues that are central to teachers' daily functioning and (b) act cooperatively to design interventions. Such consultative actions may overcome many potential sources of resistance.

Resistance is a topic of considerable concern to practitioners and researchers alike and often has been conceptualized as something bad that resides within a person or institution. As observed by Wickstrom and Witt (1993), such a view of resistance is overly simplistic and unnecessarily negative. Within the context of a consultant-consultee relationship, they define resistance as "including those system, consultee, consultant, family and client factors that interfere with the achievement of goals established during consultative interactions." Resistance, then, is "*anything* that impedes problem solving or plan implementation and ultimately problem resolution" (Wickstrom & Witt, 1993, p. 160). This definition stresses that resistance is part of a system context and is multidirectional; that is, it does not reside in only one part of the system.

Having reviewed the theoretical and empirical reports on resistance to intervention in both the psychotherapy and consultation literature, Wickstrom and Witt (1993) recommend two general tactics to respond to resistance. The first tactic they call "Joining the consultee" and the second tactic they refer to as "Emphasizing referent power." Joining the consultee involves understanding a consultee's attribution system for explaining a problem of concern and then using that attributional framework to build a link to an intervention. Emphasizing referent power involves a consultant working to become more similar to a consultee. This tactic can be accomplished by using non-authoritarian and non-coercive means of control, using cooperative modes of interaction, asking questions, and making suggestions for change in a tentative manner (Parsons & Meyers, 1984). Efforts to use the consultee's existing skills and preferences for interaction activities, thereby reducing the number of "new" aspects of an intervention, also is likely to make suggestions more acceptable, and thus less resisted.

Resistance at the system level requires that the consultant address a wide range of practical and logistical variables. For example, school psychologists must have the skills to consult and develop interventions, and this role will require training. Administrators must support the role of the consultant through public endorsement and resources. Alternate models of special education service delivery such as non-categorical approaches (see Reschly, Tilly, & Grimes, 1999) may need to be embraced by the district or even the state. This process will require considerable effort on the part of the psychologist to change the special education system.

In closing this section, it is appropriate to remember that "once the door to the classroom is closed, there is little that any of the educational specialists can do to insure the occurrence of any event that the teacher does not want to occur...." (Gutkin & Curtis, 1981, pp. 220–221). Hence, the interpersonal or therapeutic relationship skills of a psychologist are important to the delivery of consultation as is knowledge of assessment and intervention methods.

STAGE 2: PROBLEM IDENTIFICATION

Problem identification is achieved through an interview where the primary objectives are to specify the goals, assess the problem and academic and social competencies, and implement certain procedures. Consultation can involve a developmental or problem-centered focus. In developmental consultation the consultant establishes general, subordinate, and performance objectives. Usually these are obtained over a long period and in several series of interviews. In contrast, problem-centered consultation involves specification of problems that are specific and relate to one or a few primary concerns or goals. Relative to the developmental consultation process, problem-centered consultation is more time-limited.

Whether the nature of consultation is developmental or problem-centered, the psychologist needs to achieve clear specification of problems, competencies, and goals. Typically, this process involves generating precise descriptions of the student's behavior, carefully analyzing the conditions under which the problems occur, and establishing some indication of the level of persistence or strength of the problems. During the problem identification phase the goals of consultation should be established. One system that can be helpful to establish goals and benchmarks for goals is *Outcomes: Planning, Monitoring, Evaluating* (*Outcomes: PME*) (Stoiber & Kratochwill, 2001a). *Outcomes: PME* includes five steps that are featured in Figure 2. The system embraces a focused goal setting and goal attainment scaling framework in which up to three goals and corresponding benchmarks are established. The system also includes a convergent evidence scaling format so that multiple outcome measures can be examined for correspondence on intervention effectiveness. *Outcomes: PME* is a useful tool for structuring and facilitating productive problem solving in consultation.

The *Academic Competence Evaluation Scales* (ACES) (DiPerna & Elliott, 2000) and its corresponding intervention system, the *Academic Intervention Monitoring System* (AIMS) (DiPerna, Elliott, & Shapiro, 2000), is another example of an approach to assessment-intervention that is consistent with a consultative problem-solving model. The ACES-AIMS approach utilizes teachers as the primary assessment and intervention agent for children experiencing difficulties with academic skills (reading, language arts, mathematics, and critical thinking) and academic enablers (interpersonal skills, engagement, motivation, and study skills). Both the ACES-AIMS emphasize behavior rating and goal attainment scaling technology to identify and monitor behavior. Figure 3 provides an overview of the use of both the ACES and the AIMS to facilitate enactment of a five-step problem-solving process.

Another important objective is establishing assessment techniques. Together, the teacher and/or parent

Figure 2. Steps and objectives for outcomes: PME

Outcomes: PME Procedural Checklist
Check all steps completed

1 *Describe and establish baseline of the behavioral or academic concern.*

☐ 1. Behavioral or academic concern defined in observable, measurable terms.
☐ 2. Baseline established on behavioral or academic concern.
☐ 3. Situational analysis of concern conducted (e.g., routines, expectation–skill match, contingent relationships, adult/teacher support required).
☐ 4. Student and situational assets to build on identified.
☐ 5. Parental input about behavioral or academic concern obtained.

2 *Set meaningful goals and benchmarks.*

☐ 6. Goal statement focusing on controllable, measurable behaviors written.
☐ 7. Benchmarks specifying standard against which to compare and scaling format selected.
☐ 8. Target date for goal attainment established.
☐ 9. Standard or social-comparison criterion against which to measure progress selected.

3 *Plan the intervention and specify progress-monitoring procedures*

☐ 10. Intervention with empirical support or functional basis identified.
☐ 11. Intervention strategies/steps developed and reviewed with the change agent(s) or interventionist(s), such as parent, teacher, language specialist, psychologist.
☐ 12. Context, frequency, and resources needed to implement intervention determined.
☐ 13. Progress-monitoring procedures specified, including individual responsible for implementing progress monitoring and individual responsible for collecting progress-monitoring data.

4 *Monitor progress and analyze data.*

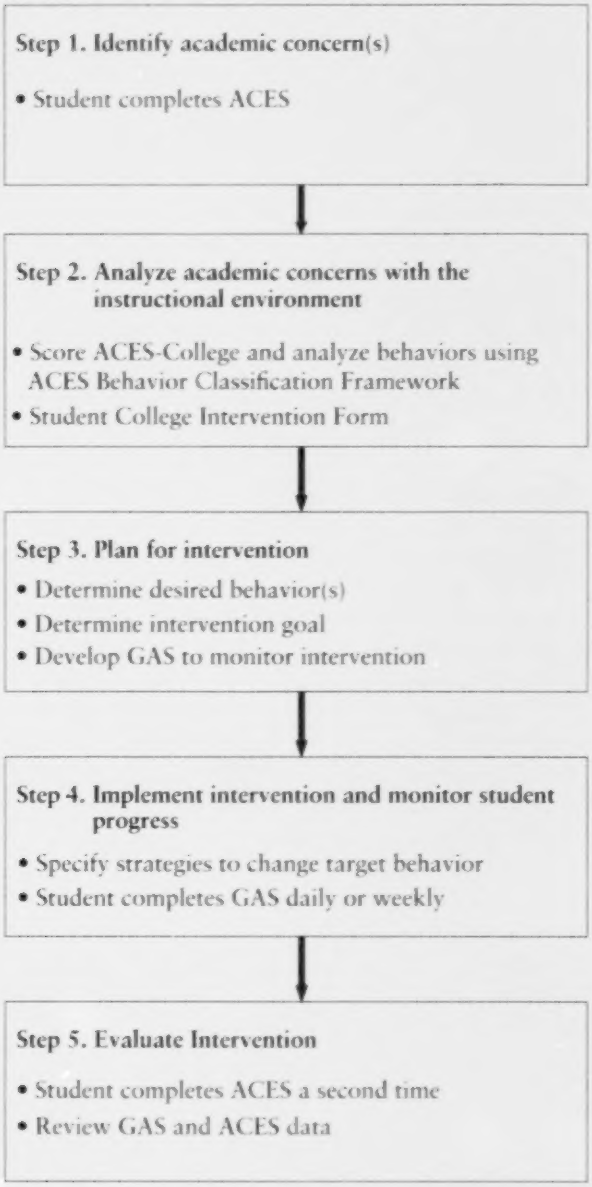
☐ 14. Goal scaled at beginning point, intervention with specified strategies implemented for specified time, goal scaled at ending point.
☐ 15. Progress-monitoring data and goal-attainment data plotted.
☐ 16. Evidence in support of child's progress documented.
☐ 17. Reasons for positive and/or negative progress review.

5 *Evaluate intervention outcomes and plan next steps.*

☐ 18. Based on convergent-evidence procedures, consensus on progress toward goal occurred.
☐ 19. Intervention-quality and intervention-integrity data reviewed.
☐ 20. Discrepancy between expected change and postintervention examined for significance.
☐ 21. Sufficient monitoring data and convergent data established.
☐ 22. Intervention goals and strategies revised, if indicated (e.g., due to poor progress).

and psychologist agree on the type or kind of measures to be used, what will be recorded, and how this process will be implemented. Finally, certain procedural objectives must be met during the problem identification phase. One of the first objectives involves establishing times, dates, and formats for subsequent interviews and contacts with the teacher and/or parent to examine procedural aspects of the consultation process. For example, the psychologist may agree to contact the teacher/parent weekly or biweekly to determine whether data are being gathered properly, or if any unique barriers have occurred. Witt and Elliott (1983) outlined nine components that facilitate the problem identification interview. These components have been revised and extended as follows:

Figure 3. The use of the ACES, College Intervention Form, and GAS within a five-step problem-solving process



Step 1. Identify academic concern(s)

- Student completes ACES

Step 2. Analyze academic concerns with the instructional environment

- Score ACES-College and analyze behaviors using ACES Behavior Classification Framework
- Student College Intervention Form

Step 3. Plan for intervention

- Determine desired behavior(s)
- Determine intervention goal
- Develop GAS to monitor intervention

Step 4. Implement intervention and monitor student progress

- Specify strategies to change target behavior
- Student completes GAS daily or weekly

Step 5. Evaluate Intervention

- Student completes ACES a second time
- Review GAS and ACES data

Source: DiPerna and Elliot (2000).

1. Explanation of the purposes problem definition: The parent or teacher should be told what is to be accomplished during the interview and why problem identification is important. (Example statement: "I would like to talk with you a few minutes about John's challenging behaviors that bother you most. We will need to assess his behaviors, when and how often they occur, and what factors in your classroom [or home] influence them. We will also need to identify academic and social competencies that John needs to acquire.")

2. Identification and selection of challenging behaviors and goals: The parent or teacher should be asked to focus attention on the problematic aspects of a student's difficulties and positive goals. (Example statement: "Please describe exactly what John is doing that has caused you concern." "What social competencies could replace his problematic and challenging behaviors?") When multiple problems are identified, it is necessary to establish a priority. (Example statement: "Which of these concerns is most pressing to you now?")

3. Identification of frequency, duration, and intensity of positive and negative prosocial competency behaviors: After challenging behavior and prosocial competencies have been defined, it is helpful to assess their basic characteristics: How often they occur (frequency), how long they last (duration), and how strong they are (intensity). (Example statements: "How many times did John cry last week?" "How long does each crying session last?" "What competency could John develop to replace his crying?") To interpret descriptions of frequency, duration, and intensity, the parent or teacher may be asked to compare the child's behavior with that of other children (social comparison). In addition, a psychologist should have knowledge of normative expectations to which the child's behavior can be compared.

4. Identification of the conditions under which the challenging behavior and goals occur: The assessment of environmental factors that occur in conjunction with a challenging behavior and goals are essential in understanding the problem. (Example statement: "How do you and the class react to John's crying?") Use of the Functional Assessment and Intervention System (FAIS) can help unravel many problems. This system involves the application of functional assessment to both challenging behaviors and social competencies.

5. Identification of the required level of performance: Obtaining a description of the behavior required of a student is as important as obtaining a description of the student's problem behavior. (Example statement: "What would you consider to be an acceptable frequency for this out-of-seat behavior?") Once a desired or expected level of performance is identified, it serves as a goal.

6. Identification of the student's strengths and social competencies: Learning what a child does well is often more useful than learning what a child does not do or does poorly. (Example statement: "What does John do best when interacting with his classmates?") Developing interventions that consider a student's strengths helps to increase the probability of a successful treatment. Again, the FAIS can be helpful in this regard.

7. Identification of assessment procedures: All interventions require some assessment or recording of behavior. Thus, a consultant should help a teacher or parent decide what, how, when, and where behavior will be recorded and who will do the recording.

8. Identification of consultee effectiveness: Given that one major goal of consultation is to enable a consultee to solve his or her own problems in the future, it may be necessary to teach or model problem-solving skills and enhance the consultee's confidence in his or her ability to solve problems. The goal obviously is for the consultant to be helpful to the consultee. To accomplish this goal, Witt and Martens (1988) advocate an empowerment, rather than an advice giving, philosophy of service for consultants. However, an empowerment philosophy assumes consultees basically are skilled individuals who can become more capable of solving their own problems by knowing what resources are available and how to gain access to them (Dunst & Trivette, 1988). If the consultee does not have the skills to provide services to the client, then these skills should be taught or other intervention options considered. One can determine the consultee's potential effectiveness by asking about how similar problems have been handled in the past, assessing what methods the consultee already has used to remediate the target problem, and judging whether the consultee is self-reliant or dependent on others for support (Meyers, Liddell, & Lyons, 1977). The AIMS Teacher Intervention Record form mentioned earlier is a useful tool for operationalizing this component of the problem identification interview.

9. Summary of the interview: The final step in the problem identification stage should include a summary of the important points discussed and a review of the problem definition. This summary should include a statement of the specific challenging behavior(s) or clarification of any further assessment necessary to refine the goals.

STAGE 3: PROBLEM ANALYSIS

After baseline data are collected on the areas of concern, the psychologist and teacher/parent meet to decide jointly on factors that might lead to some resolution of the problem. In this regard, the consultation process will focus on student, parent/teacher, and general environmental variables that may be of relevance.

The problem analysis interview includes five major steps: (a) choosing analysis procedures, (b) determining the conditions and/or skills analysis, (c) developing plan strategies, (d) developing plan tactics, and (e) establishing procedures to evaluate performance during implementation of any intervention program. Within the context of these phases, the psychologist might first analyze the factors that lead to potential solution of the problem and then develop a plan to solve the problem.

The psychologist focuses on conditions that facilitate attainment of the mutually agreed upon goals. Generally, the following steps are necessary:

1. Specifying whether the goal of intervention is to increase, decrease, or maintain behavior and determining what social competencies will be targeted.

2. Identifying setting events and antecedent/consequential conditions associated with behavior.

3. Determining what current conditions affect the behavior by comparing the existing situation to related research findings.

4. Identifying conditions not currently associated with behavior, but which nonetheless could influence solving the problem.

Through mutual problem-solving efforts, the psychologist and teacher/parent must analyze the kinds of child skills necessary to achieve the goals of consultation during the problem analysis phase. This process includes analyzing skills that the child does not possess, and can include both academic and social performance. Basically, the psychologist must work with the teacher/parent (and child if possible) to identify psychological and educational principles that relate to attaining the goals of consultation. It is beyond the scope of this chapter to outline these procedures in great detail. Rather, the reader is referred to a number of sources that can be useful to analyze overt behavioral and cognitive features that relate to instructional and social functioning (e.g., Bergan & Kratochwill, 1990; DiPerna, Elliott, & Shapiro, 2000; Stoiber & Kratochwill, in preparation).

The outcome of successful problem analysis is a plan to put into effect during the intervention implementation process. Development of this plan includes first specifying broad strategies that can be used to achieve the mutually agreed upon goals. The plan typically indicates *sources of action* to be implemented. Second, plan tactics are used to guide implementation of the strategy and outline principles to be applied during the intervention. For example, if reinforcement strategies are to be used, the person responsible for carrying out the plan and the conditions under which they will occur should be specified. During this phase psychologists might also assess treatment acceptability prior to its implementation. A number of scales have been developed for assessment of pretreatment acceptability, and readers are encouraged to consult this material (Elliott, 1988b; Witt & Elliott, 1985). Appendix A includes copies of two scales that can be used in the assessment of treatment acceptability.

Finally, during problem analysis the psychologist and teacher/parent must establish performance and assessment objectives that will be used during plan implementation. Typically this procedure follows from a conditions analysis and involves specification of an assessment procedure previously used during baseline. For example, when plan implementation involves skill development, some agreed upon format for collection of data on performance related to the final objectives achieved is necessary.

STAGE 4: PLAN IMPLEMENTATION

The fourth stage in problem-solving consultation involves implementing an intervention plan. Some initial activities are necessary during the plan implementation process and involve ensuring that the intervention is likely to succeed. In this regard, the psychologist should maximize the probability that the intervention plan is put into effect by the teacher/parent and/or child during this part of the consultation process. This step will require collaborative decisions regarding role assignments, material assembly, and skill development, as needed during the process. Although there is no formal interview during the plan implementation phase, it is the responsibility of the psychologist to monitor the implementation of the intervention and work with the teacher/parent to revise procedures during plan implementation, if it is determined necessary. It also may be desirable for the consultant to observe the child and/or teacher or parent to monitor behaviors and determine the need for subsequent revisions in the plan.

During plan implementation the three major tasks that must be accomplished include skill development of the consultee (if necessary), monitoring the implementation process, and plan revisions. Typically, the psychologist must determine whether the teacher/parent has the skills to carry out the plan. If skill development is required, then the consultee must be offered some type of training or guidance. This training might be offered through direct instruction of the consultant, modeling the intervention by the consultant, videotape and self-instructional materials, or through formal training offered by others.

A second task is to monitor data to determine if assessment is occurring as intended. Consultee records usually are examined to assess child outcome. This process usually will indicate to the psychologist when data are being gathered, how the performance of the child is being assessed, and what behaviors are being observed. It may also help the psychologist to determine whether the plan is actually proceeding as designed. If little progress is observed, then it is advisable for the psychologist to meet with the teacher/parent and revise the plan accordingly.

Monitoring plan implementation generally occurs in two ways. First, the child's behavior is monitored on an ongoing basis by the teacher/parent. This progress monitoring is a continuation from the problem identification and problem analysis phases of consultation. A second type of monitoring activity involves an evaluation of the strategies that are associated with the plan implementation itself. It is essential for the psychologist and teacher/parent to ensure that the plan agreed upon is being carried out as designed. The psychologist may choose to monitor plan implementation and integrity by discussing the intervention plan with the teacher or parent. A second procedure that can be used to complement this strategy is to actually observe the plan in operation or to get the consultee to report integrity data periodically (Gresham, 1989). It is acknowledged that various individuals might serve in the role of intervention implementors. Nevertheless, it is very likely that the psychologist will use a variety of procedures to facilitate plan implementation that are compatible with resources and responsibilities in the school or setting.

Finally, changes should be made in the plan when necessary. If the child's behavior is not changing in the desired direction, then plan revision should occur. Generally, this outcome will require that the psychologist and teacher/parent return again to the problem analysis phase to further analyze variables such as the setting, intrapersonal child characteristics, skill deficits, or social competencies. Likewise, it may be necessary to return to the problem identification stage if it is determined that the nature of the problem has changed.

STAGE 5: PLAN EVALUATION

Plan evaluation is implemented through a formal plan evaluation interview and typically is undertaken to determine whether the goals of consultation have been obtained. The process of evaluation includes assessment of goal attainment, plan effectiveness, and implementation planning.

The first major step in plan evaluation is to decide whether the actual goals previously agreed upon have been obtained. This decision is determined through discussion with the consultee and observation of the client's behavior. *Outcomes: PME* can be very useful to make decisions about the goals of consultation and can be continued during this phase. The process of evaluating goal attainment first was initiated during problem identification where the objectives and procedures for measuring mastery were specified. If *Outcomes: PME* was used, then specific benchmarks for each consultation goal were indicated. The data gathered since the problem identification phase should provide some evidence as to whether there is congruence between objectives and the problem solution. Basically, this step occurs on the basis of the data collected, but additional strategies might be invoked as well, such as social validation criteria specified in *Outcomes: PME*. That is, the psychologist will want to know whether the child reached some clinically established level of change and whether the intervention program brought the child's performance within a range of acceptable behavior as compared with normal or typical peers. Determination of the congruence between behavior and objectives generally leads the psychologist to conclude that no progress was obtained, some progress was made, or the actual goal was obtained.

The mechanism for evaluating plan effectiveness can occur through one of several case study strategies that have been used frequently in single-case evaluations (Kratochwill, 1985). In this regard, a variety of clinical design procedures might be implemented to facilitate decisions regarding progress in the consultation process. Again, it is beyond the scope of this chapter to outline these procedures in detail. Instead, the interested reader is referred to a primary source where these designs are reviewed (e.g., Hayes, Barlow, & Nelson-Gray, 1999). The recommended strategies basically involve a simple time-series design that includes an A/B format.

Advances in the evaluation of intervention effects and consultation outcomes continue to appear in the research literature. Several of these advances have been used in the evaluation of community mental health services and supplement the case study and social validation strategies that have traditionally been used by consultants. Two of the most practical strategies are Goal Attainment Scaling (see Stoiber & Kratochwill, 2000) and the Reliable Change index (RC) Jacobson, Follette, & Revenstorf, 1984). Both of these evaluation strategies are used in the ACES-AIMS approach to academic interventions and can be generalized broadly.

Briefly, there are several different approaches to using a goal attainment framework. The basic tactic, however, is one where a consultee would be asked to describe five to seven levels of intervention outcome. The most unfavorable outcome described is given a -2 or -3 rating, the expected outcome is given a 0 rating, and the most favorable outcome is given a +2 or +3 rating. Ratings of -1 to -2 and +1 to +2 are ascribed to benchmark descriptions of outcomes that are situated between the most unfavorable and expected outcome and the most favorable and expected outcome, respectively. *Outcomes: PME* can be used to get daily or weekly measures on intervention progress, as well as final outcome perceptions from a consultee. *Outcomes: PME* is a sensitive system since both over and under attainment of objectives can be rated.

The RC evaluation method was first proposed by Nunnally and Kotsche (1983) and is defined as the difference between posttest scores and pretest scores divided by the standard error of measurement. Typically an RC of +1.96 or greater is considered statistically significant, and more importantly it is inferred that the intervention produced a reliable change in a person's behavior. The RC is designed to be used with data from rating scales or individualized tests where total pretest and posttest scores can be calculated. However, this metric for reporting intervention outcomes is affected by the reliability of the dependent measures. Gresham noted that the dual criteria of social validation (social comparison and subjective evaluation) and RC should provide practitioners with a means for documenting educationally and statistically significant changes in behavior.

Once it has been determined that the problem has been solved, post implementation planning occurs to help ensure that the particular problem does not occur again. There are some alternatives available for the psychologist and teacher/parent in designing post implementation plans. One strategy is to leave the plan in effect. Typically, however, a plan that is put into effect will need to be modified (another alternative) to facilitate maintenance of behavior over time. There is considerable evidence in the intervention literature that specific tactics are needed to facilitate maintenance and generalization of behavior, and these tactics must be accomplished during this phase of consultation. Generalization may occur naturally, but more likely it will need to be programmed. Several factors have been identified that have a bearing on the generalization of skills (Haring, 1988; White et al., 1988). Table 1, from White et al. (1988), lists the strategies for facilitating generalization along with a definition and example. The table is based on the seminal work of Stokes and Baer (1977) and can serve as a useful guideline for consultants.

Another major objective that should occur during the plan evaluation interview is discussion of post implementation recording. Generally, this procedure refers to the process of continuing record keeping activities to determine whether the problem occurs in the future. Usually, the psychologist and teacher/parent select periodic measures that are convenient to use and may maintain specific features of the original plan to facilitate this data collection process. Best practices also suggest that the psychologist consider conducting post-plan implementation acceptability assessment as well. These procedures can be implemented informally or more formally with acceptability instrumentation (Elliott, 1988b). Finally, the teacher/parent should notify the psychologist of any reoccurrence of the problem behaviors that might be indicated. These usually can be brought to the psychologist's attention and specific tactics set up to establish a system to analyze the problems.

Consultation With Teachers and Parents

Traditionally, psychologists have implemented consultation with classroom teachers in an effort to establish intervention programs in the regular classroom and thereby reduce the number of placements in special education programs. This emphasis on prevention and direct intervention with teachers advanced the development of a knowledge base to prevent more serious behavioral problems in children. Within the past decade, school-based consultation services have expanded to include work with special education teachers, particularly teachers of emotionally impaired children (Gable et al., 1998; Kratochwill, Sheridan, Carrington Rotto, & Salmon, 1991) and teachers from early intervention programs for preschool-age children (Gettinger & Stoiber, 2000). In addition, consultation also has been used successfully to remediate academic and socialization difficulties in school settings (Stoiber & Kratochwill, in preparation). Applications such as these have presented unique opportunities for school psychologists to increase contact with special education teachers while generally addressing more severe presenting problems in special needs children who often experience multiple difficulties. Hence, the role of consultant has become increasingly specialized, with unique time demands and intervention needs that may vary according to the child's presenting problems and the teacher's level of expertise in areas such as behavior management and individualized instruction.

Table 1. Strategies for facilitating generalization

Strategy	*Definition*	*Example*
Train and hope	Providing simple instruction and then "hoping" that generalization will occur. Actually the absence of any special strategy.	Three preschool boys who were blind and severely or profoundly retarded were taught to reach for noise-making toys always presented at the midline. None of the boys generalized to objects presented on the right or left.
Setting: Training in the natural setting	Training is conducted directly in at least one type of setting in which the skill will be used. Generalization is then probed in other non-training settings.	The social interaction skills of several individuals with severe handicaps were trained in the classroom and courtyard during class breaks.
Sequential modification	Training is provided in one setting and generalization is probed in other settings. If necessary, training is conducted sequentially in more and more settings until generalization to all desired settings is observed.[a]	One girl with moderate handicaps needed articulation training in three settings before generalizing to all remaining situations of interest; a second girl only required training in two situations before generalizing.
Consequences: Introduce to natural maintaining contingencies	Ensuring that learner experiences the natural consequences of a behavior by teaching a functional skill that is likely to be reinforced outside instruction; training to a level of proficiency that makes the skill truly useful; making sure the learner actually does experience the natural consequence; and/or teaching the learner to solicit or recruit reinforcement outside instruction.	Three teens with multiple handicaps and severely retarded were taught to use symbols and pictures to request objects. Generalization was encouraged by using objects that would be regularly encountered outside instruction, making sure the boys always carried their communication boards, and that someone would always be present to provide any requested items.
Use indiscriminable contingencies	If natural consequences cannot be expected to encourage and maintain generalization, then artificial consequences or schedules of natural consequences might be used. However, it is best if the learner cannot determine precisely when those consequences will be available, and so must behave as if they always are.	Two behavior disordered and five normal preschool children always generalized their interaction and study better when verbal praise by the teacher was provided after progressively greater delays, rather than immediately following each behavior.
Train to generalize	The learner is only reinforced for performing some generalized instance of the target skill. Performing a previously reinforced version of the response is no longer reinforced.	Four youths with severe retardation were taught to name specific items. Contingencies were then altered so they were only reinforced if they named untrained items. After three sessions, all youths generalized well to untrained items.
Antecedents: Program common stimuli	Selecting a salient, but not necessarily task-related, stimulus from the situation to which generalization is desired, and including that stimulus in the training program.	Stokes and Baer (1977) report a case in which an individual with severe retardation was taught exercise skills to facilitate integration in a physical education class. Music was played during the PE class, so music was also introduced into the individual's training sessions to make the two situations more similar.
Sufficient exemplars	A strategy similar to Sequential Modification, involving sequential addition of stimuli to the training program until generalization to all related stimuli occurs.[b]	An adolescent with severe handicaps was taught to name objects, and probed with other objects from the same class. Some objects required only a single exemplar to produce generalized naming, while other objects required five exemplars before generalization occurred.

(Table continues on the following page.)

Table 1. (continued)

Strategy	*Definition*	*Example*
Multiple exemplars	Several examples of the stimulus class to which generalization is desired are trained at the same time.	Three adults with profound mental retardation were trained in three types of exercise. Generalization occurred to a group exercise program and to two untrained exercises.
General case programming	The universe to which generalization is desired is analyzed, and representative examples of positive stimuli (stimuli in the presence of which the skill should be used), negative stimuli (stimuli in the presence of which the skill should not be used), and irrelevant stimuli (stimuli which should not affect skill use, but might inappropriately do so) are selected for training.	Six young men with moderate or severe retardation were trained on three vending machines that reflected the range of machine types found in the community. Good generalization was obtained to 10 untrained machines in the community.
Other: Train loosely	Settings, cues, prompts, materials, response definition, and other features of the training situation are purposely varied to avoid a ritual, highly structured, invariant program that might inhibit generalization.	Mothers were taught to vary the type of stimuli and reinforcers they used in working with their children's motor skills. All children learned their skills quickly and generalized well to another setting.
Mediate generalization	Teaching a secondary behavior or strategy that will help an individual remember or figure out how and when to generalize, or which will dispel the differences between the training and generalization situations.	Five adolescents with moderate or severe mental retardation were taught to self-instruct task completion using a picture sequence. They then used the self-instruction skill to generalize task completion of a new task with a new picture sequence.

[a] Stokes & Baer (1977) described this strategy as training in one situation and, if that fails to produce generalization, training in all remaining situations of interest. The more literally "sequential" nature of the procedure as described above seems better suited for describing current application of the strategy.

[b] Stokes & Baer used this label to describe the successive introduction of new stimuli or settings, but separating the two variations seems more advisable for the current study.

Note: Adapted from White et al., "Review and analysis of strategies for generalization." In N. G. Haring (Ed.), *Generalization for students with severe handicaps: Strategies and solutions* (pp. 15–51). Seattle: University of Washington Press. Copyright 1988. Reproduced with permission.

Although consultation with teachers to deal with problem reduction is an effective method of remediating school-based problems, this focus fails to address the broader context and focus within which the child's problems may occur. For example, a withdrawn child who exhibits an absence of peer interactions at school likely would be unable to develop and maintain positive social relationships with neighborhood peers. Focusing exclusively on this child's social withdrawal in the school setting through teacher-only consultation restricts conceptualization, analysis, and intervention of the problem to a single target domain and setting. The broader behavioral interrelationships across environments would not always be considered. First, consultation should focus on development of social competencies and not just the reduction of problematic behaviors (Stoiber & Kratochwill, in preparation). Second, problem-solving consultation should be extended to serve as a link among the significant settings in a child's life, primarily, the home, school, and community environments. This approach facilitates a comprehensive conceptualization of the problem while involving primary caretakers in the intervention process. In addition, although few investigators have assessed the generalization of intervention effects across settings, the potential benefits of broadening the focus of problem-solving consultation to encompass the interacting system in the child's life are apparent.

There are several methods that can be used to expand the scope of consultation. First, as we have noted throughout this chapter, the focus of problem solving needs to move beyond a target behavior focus where challenging behaviors are reduced to a focus that also includes building social competencies (Stoiber & Kratochwill, 2000). Table 2 provides an example of the social competency domains from the FAIS. During the problem analysis phase the consultant can ask teachers and parents to complete the Social Competence Performance Scale and target one or more of the domains for intervention. Similarly, on the academic side of functioning teachers and students could complete the *ACES* to target academic enablers or skills for intervention. Figure 4 provides an illustration of the ACES subscales.

Another method of expanding consultation services entails involvement of parent-teacher pairs in problem solving. In conjoint consultation, parents and teachers together serve as consultees (Sheridan & Kratochwill, 1992; Sheridan, Kratochwill, & Bergan, 1996). The primary goals of this approach are to bridge the gap between home and school settings, maximize positive intervention effects within and across settings, and promote generalization of intervention effects over time. Continuous data collection and consistent programming across settings also are inherent with this approach. Conjoint consultation has been found to be an effective method of service-delivery in enhancing social initiation behaviors across home and school settings (e.g., Sheridan, Kratochwill, & Elliott, 1990). Likewise, it has been demonstrated to be effective in enhancing the academic productivity of underachieving students (e.g., Galloway & Sheridan, 1994). Conjoint consultation also has been effective in decreasing the irrational fears of a kindergarten student and has been used to enhance the effects of parent training in managing the behavior of children diagnosed with attention deficit hyperactivity disorder (ADHD) across home and school settings (e.g., Colton & Sheridan, 1998; Galloway & Sheridan, 1994).

Use of problem-solving consultation also has been extended beyond schools to address problems with individuals other than teachers, such as parents. Parent-only consultation may be applicable when a child's problematic behaviors are observed predominantly in the home and/or community settings but are not evident in the school environment. For example, parent consultation has been used to decrease the noncompliant behaviors of school-age children whose difficult behaviors were displayed at home and in public places but were not observed in the more structured classroom setting (e.g., Carrington Rotto & Kratochwill, 2001). In addition, consultation with parents also has been advanced as a model of early intervention with the goal of decreasing noncompliant and aggressive behaviors of preschool-age children (Carrington Rotto & Kratochwill, 1994). In parent-only consultation, the traditional problem-solving consultation framework provides structure for involving parent(s) in the process of identifying and analyzing the problem, as well as observing and evaluating intervention effects over time. Use of parent training provides structure for teaching parents specific skills, which enhance plan implementation. Necessary preparations for plan implementation include teaching parents specific behavior management skills and ensuring that they are adept at imple-

Table 2. Social competence chart: Goals, sub-goals, and performance indicators

Social competence goal 1: Emotion regulation and self-control skills

Child will demonstrate an awareness of, and a sense of *personal* responsibility for his *or her* own feelings, thoughts, actions, reactions, and learning.

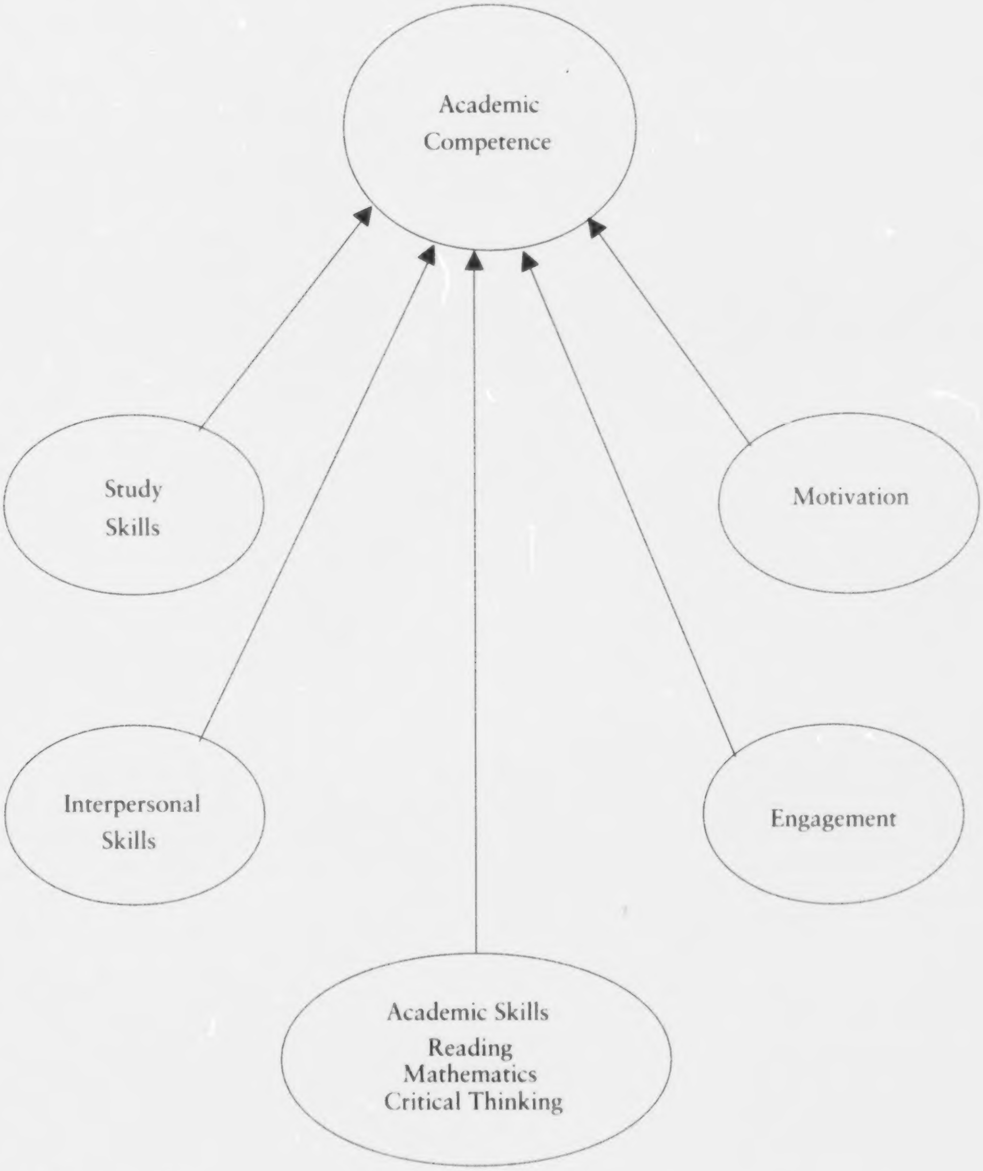
Social competence goal 2: Social awareness and group participation

Develop and maintain productive social relationships, including competence in understanding feelings in others, friendship-making, interpersonal conflict resolution, and being able to adapt and work cooperatively in group situations.

Social competence goal 3: Social decision making and responsible life choices

Develop ethical and responsible ways in making decisions, and developing positive goal direction, including those that influence attitudes, behaviors, and functioning in school but also can affect the decisions and responses one makes in their home and community settings.

Figure 4. The clusters of skills, attitudes. and behaviors contributing to academic competence


Academic Competence
Study Skills
Motivation
Interpersonal Skills
Engagement
Academic Skills
Reading
Mathematics
Critical Thinking

Source: DiPerna and Ellliott (2000).

menting these skills. Specific methods of promoting generalization of parent behaviors (i.e., skill implementation) across settings and situations to enhance specific child behaviors need to be implemented.

In sum, problem-solving consultation provides a useful framework for working within and between family and school systems. This systematic problem-solving approach may be conducted with teachers, parents, or teacher-parent pairs to enhance child functioning across home, school, and community settings. Together with parents and teachers, psychologists may develop and implement intervention plans to address diverse target problems in areas such as academic productivity, socialization, and behavioral difficulties. Future research should be directed toward replication of intervention effects with diverse student populations and further examination of alternative parent and teacher roles and levels of involvement in consultation.

Writing Consultation Case Reports

At various times during the course of consultation, the consultant may wish to formally communicate the results of the intervention program to the parent and/or teacher. Indeed, it is the ethical and professional responsibility of the consultant to ensure that information concerning an intervention is communicated in a valid, clear, and concise manner. Although a variety of traditional report formats exist (see Gelfand & Hartmann, 1984; Grimes, 1983; Martin, 1972; and Ownby, 1987 for overviews), the present format provides a conceptual scheme for reporting interventions that are compatible with best practices in consultation. The consultant, however, is advised to modify this format to accommodate personal preferences and meet specific institutional needs and standards. The reporting format that we present can readily be used for consultation activities that are part of a prereferral intervention or specialized programs that are part of multidisplinary or Individual Education Plan team follow-up activities.

The present report format represents an outline for describing the activities of an entire consultation program (see Table 3). If reporting information prior to completion of the plan, then only parts of this report would be appropriate. General characteristics of the consultation report include (a) Background Information, (b) Problem Definition, (c) Intervention Plan, (d) Plan Evaluation, and (e) Summary and Recommendations.

The section on *Background Information* includes demographic information describing the child and details regarding the setting in which the problem occurs. For example, the child's name, date of birth, age, gender, school, parents, address, telephone, and teacher should be specified. The consultant should also include a description of the family, siblings, socioeconomic status, peers, teacher, and any other ecological features that are relevant to the case.

Many alternative ways exist to define a problematic situation. For example, problem behaviors may be described at various levels of specificity. Alternatively, a problem situation can be conceptualized in terms of reducing negative behaviors or increasing social competencies. The purpose of the *Problem Definition* is to provide a description and rationale for the problem as it was defined by the psychologist (i.e., consultant) and teacher/parent during consultation. Information from the problem identification interview will be especially relevant. More specifically, details regarding the referral problem, target goal(s), desired outcome behavior(s), critical setting or situations for change, and a preliminary functional assessment should be included.

Discussion of the initial referral issue should indicate the referral source and a description of the problem and goals. The consultant also should note that consent for participation was obtained from the child's parents. An operational definition of the problem as agreed upon by the psychologist and teacher/parent should be described in terms of deficits, excesses, frequency, intensity, and duration. Specification of the target area(s) and a statement regarding desired outcome and goal(s) also should be included. In addition, the consultant should discuss the critical setting where the child's behavior was expected to change and provide a detailed description of the situations necessary for such a change.

Finally, a preliminary functional assessment should compare the antecedents and consequences surrounding the problem behavior and social competencies to those necessary for attainment of the desired behavior. This discussion should be based on assessment procedures such as interview, direct observation, and/or standardized rating scales and checklists. Hence, the consultant integrates the baseline data, observational data, and problem identification and analysis interviews to analyze the discrepancy between the existing behavior and desired behavior. A sample of each observational data sheet used during the case may be included in the report. A description of any intervention programs or procedures implemented during the process of consultation should be included in the *Intervention Plan*. The consultant should characterize the basic design of the plan according to variables such as the (a) time needed for implementation, (b) intervention agents, (c) criterion for delivery of procedures, (d) set-

Table 3. Outline for writing a consultation case report

I. *Background information*
  - A. Demographic information on the child
  - B. Ecological context of the problem

II. *Problem definition*
  - A. Referral problem
  - B. Target behaviors
  - C. Desired outcome behaviors
  - D. Critical setting/situations for change
  - E. Preliminary functional analysis

III. *Problem analysis*
  - A. Description of assessment or data recording procedures
  - B. Rationale for use of data collection procedures
  - C. Presentation and discussion of data

IV. *Intervention plan*
  - A. Evaluation design
  - B. Contingencies
  - C. Criterion for contingencies
  - D. Acceptability of intervention to teacher/parent and child
  - E. Personnel involved in intervention implementation
  - F. Setting and time
  - G. Resources
  - H. Procedures for promoting new behaviors
  - I. Procedures for increasing existing behaviors
  - J. Procedures for reducing interfering problem behaviors
  - K. Procedures for facilitating generalization
  - L. Treatment integrity checks

V. *Plan evaluation*
  - A. Change in behavior via direct observation
  - B. Change in teacher/parent performance ratings
  - C. Mainstreamed peer comparison
  - D. Outcome interview with significant adults
  - E. Intervention side effects

VI. *Summary and recommendations*
  - A. Summary of results obtained
  - B. Discussion of effectiveness
  - C. Suggestions for increasing program effectiveness
  - D. Suggestions for future follow-up

ting and time, and (e) resources or materials necessary. In addition, the consultant should specify clearly the procedures used for promoting new social competencies, increasing existing behaviors, and/or reducing interfering problem behaviors. A rationale describing why the particular intervention procedure(s) are relevant to the challenging behavior is essential. In some cases, an intervention "package" consisting of many specific techniques (e.g., feedback, reinforcement, modeling) may be used. Identification of the individuals who are responsible for implementing the integrity plan and a discussion of the degree to which the plan is acceptable to the teacher/parent and child also should be included. Finally, it is desirable to document the strategies used to facilitate generalization and to verify the intervention plan was implemented as intended.

This list is intended to serve as a resource and should be considered carefully. The consultant must determine the variables most pertinent to the specific case; thus, it may be necessary to generate additional dimensions that adequately describe the intervention. Likewise, some of the intervention variables listed may not apply to all cases. It may be helpful to use headings or an outline format similar to that in Table 3 to facilitate note taking during consultation interviews and post-intervention preparation of a clear and concise report.

A complete description of the *Intervention Evaluation Plan* should be provided, including methods used to evaluate the specific intervention components and document changes in the child's behavior. Especially relevant will be data from the plan evaluation interview. The psychologist should present the results of the program in the context of the data collected over the duration of the program and during the generalization or follow-up phases. For example, direct observations and ratings of the child's performance may provide documentation of intervention outcomes. In addition, the consultant may evaluate the performance of a typical peer for social comparison before and after the plan is initiated. At least one figure should be used to portray the data collected, and the psychologist should acknowledge any unique features of the data (e.g., absence, program not followed) or challenges that may have occurred. The consultant should also provide details regarding any unanticipated side effects which may have resulted from the intervention plan.

The *Summary and Recommendations* should begin with a brief overview of the results obtained and a rationale for program effectiveness or failure. Here it is important to make a judgment about whether change was produced at, above, or below expected levels. The consultant also should include suggestions for increasing the effectiveness of the program. Recommendations may provide suggestions for (a) future follow-up, (b) enhancing maintenance and generalization, and (c) subsequent intervention plans. These suggestions should identify the socialization agents (e.g., parents, teachers, peers) and relevant materials that may be useful for the child or intervention personnel in future work.

SUMMARY AND CONCLUSIONS

Problem-solving consultation may best be conceptualized as a five-stage approach that uses broad-based behavioral and collaborative methods as the basis for problem identification, analysis, intervention, and evaluation. The major features of consultation include its indirect service delivery approach and problem solving focus. Consultation has two principal goals. The first goal is to produce change in the child's behavior or to enhance social competencies indirectly through collaborative problem solving between a consultant (psychologist) and consultee(s) (e.g., teacher/parent). A second, yet equally important goal of consultation is to empower the consultee with skills that will enable future independent problem solving.

A growing body of research has accumulated on the positive outcomes of problem-solving consultation (Gutkin & Curtis, 1999; Sheridan et al., 1996). Additionally, the practice of problem-solving consultation is expanding rapidly. In particular, there is a strong movement toward problem-solving consultation in school settings to the exclusion of traditional refer-test-place practices (Reschly & Ysseldyke, 1995). This growing enthusiasm over the potential benefits of consultation is apparent in the numerous articles on the topic published recently in both the psychological and educational literature (Sheridan et al., 1996; Zins, Kratochwill, & Elliott, 1993). As psychologists have become interested in the integration of consultation with daily activities and child adjustment in schools and homes, questions regarding the process and outcome of consultation have surfaced. Studies have examined the application of interventions in consultation to achieve changes in behavior and compared the effectiveness of consultation to other forms of service delivery.

Specifically, research documenting the effectiveness of consultation has been organized around four areas of investigation: (a) outcome research, (b) process research, (c) practitioner research, and (d) training research (Gresham & Kendell, 1987; Sheridan et al., 1996). Research addressing outcomes of consultation document its effectiveness in remediating academic and behavior problems manifested by children in school settings (Bergan & Kratochwill, 1990; Sheridan et al., 1996). Likewise, these same studies suggest that changes result in the teacher's and parent's behavior, knowledge, attitudes, and perceptions. Although consultation traditionally has been directed toward a single client (i.e., teacher), it also has been applied successfully with parent groups (e.g., conjoint consultation). A collaborative problem-solving model whereby the consultant, teacher, and parents share information, value each other's input, and incorporate each other's perspective in developing the intervention plan is considered to afford the greatest benefits (Colton & Sheridan, 1998; Sheridan & Kratochwill, 1992).

Typically, process research has focused on problem identification, since the consultant's ability to elicit a clear description of the problem has been identified as the best predictor of plan implementation and problem solution (e.g., Bergan & Tombari, 1975, 1976). Studies in this area also have focused on comparing consultation effectiveness with other forms of service delivery (Medway, 1979). It remains difficult to draw conclusions from the studies addressing variables associated with the process of consultation due to limitations in scope, theoretical base, and research methodology (Gresham & Kendell, 1987).

Traditionally, studies on practitioner utilization have suggested that school-based consultation is a preferred activity for school psychologists (e.g., Gutkin & Curtis, 1981; Meacham & Peckam, 1978). Likewise, teachers and administrators view consultation as an essential aspect of school psychological services (Curtis & Zins, 1981). Most school psychologists do engage in consultation activities (Curtis, Walker, Hunley, & Baker, 1999). However, many practitioners identify limitations to implementing consultation due to time constraints and lack of consultee commitment (Gresham & Kendell, 1987). Both individual consultant/consultee and system issues must be addressed to deal with those constraints.

Overall, problem-solving consultation is a rapidly growing area with increasing empirical support. However, future studies must utilize more sophisticated designs and measurement strategies to evaluate variables in consultation. Careful scrutiny of consultation will impact its future use as an alternative to traditional assessment and intervention practices in educational settings and may result in an increased emphasis on the development of formalized training in school psychology programs. In turn, these developments would contribute to the practice of school psychology and positively impact the children, teachers, and parents receiving psychological and educational services.

APPENDIX: BEHAVIOR INTERVENTION RATING SCALE

You have just read about a child with a classroom problem and a description of an intervention for improving the problem. Please evaluate the intervention by circling the number which best describes *your* agreement or disagreement with each statement. You *must* answer each question.

		Strongly Disagree	Disagree	Slightly Disagree	Agree	Strongly Agree
1.	This would be an acceptable intervention for the child's problem behavior.	1	2	3	4	5
2.	Most teachers would find this intervention appropriate for behavior problems in addition to the one described.	1	2	3	4	5
3.	The intervention should prove effective in changing the child's problem behavior.	1	2	3	4	5
4.	I would suggest the use of this intervention to other teachers.	1	2	3	4	5
5.	The child's behavior problem is severe enough to warrant use of this intervention.	1	2	3	4	5
6.	Most teachers would find this intervention suitable for the behavior problem described.	1	2	3	4	5
7.	I would be willing to use this intervention in the classroom setting.	1	2	3	4	5
8.	The intervention would *not* result in negative side-effects for the child.	1	2	3	4	5
9.	The intervention would be appropriate for a variety of children.	1	2	3	4	5
10.	The intervention is consistent with those I have used in classroom settings.	1	2	3	4	5
11.	The intervention was a fair way to handle the child's problem behavior.	1	2	3	4	5
12.	The intervention is reasonable for the behavior problem described.	1	2	3	4	5
13.	I liked the procedures used in the intervention.	1	2	3	4	5
14.	The intervention was a good way to handle this child's behavior problem.	1	2	3	4	5
15.	Overall, the intervention would be beneficial for the child.	1	2	3	4	5
16.	The intervention would quickly improve the child's behavior.	1	2	3	4	5

		Strongly Disagree	Disagree	Slightly Disagree	Agree	Strongly Agree
17.	The intervention would produce a lasting improvement in the child's behavior.	1	2	3	4	5
18.	The intervention would improve the child's behavior to the point that it would not noticeably deviate from other classmates' behavior.	1	2	3	4	5
19.	Soon after using the intervention, the teacher would notice a positive change in the problem behavior.	1	2	3	4	5
20.	The child's behavior will remain at an improved level even after the intervention is discontinued.	1	2	3	4	5
21.	Using the intervention should not only improve the child's behavior in the classroom, but also in other settings (e.g., other classrooms, home).	1	2	3	4	5
22.	When comparing this child with a well-behaved peer before and after use of the intervention, the child's and the peer's behavior would be more alike after using the intervention.	1	2	3	4	5
23.	The intervention should produce enough improvement in the child's behavior so the behavior no longer is a problem in the classroom.	1	2	3	4	5
24.	Other behaviors related to the problem behavior also are likely to be improved by the intervention.	1	2	3	4	5

The Children's Intervention Rating Profile

		I agree				I do not agree
1.	The method used to deal with the behavior problem was fair.	+	+	+	+	+
2.	This child's teacher was too harsh on him	+	+	+	+	+
3.	The method used to deal with the behavior may cause problems with this child's friends.	+	+	+	+	+
4.	There are better ways to handle this child's problem than the one described here.	+	+	+	+	+
5.	The method used by this teacher would be a good one to use with other children.	+	+	+	+	+
6.	I like the method used for this child's behavior problem	+	+	+	+	+
7.	I think that the method used for this problem would help this child do better in school	+	+	+	+	+

Developed by Witt and Elliott (1983).

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Stoiber, K. C., & Kratochwill, T. R. (Eds.). (1998). *Handbook of group interventions for children and families.* Boston: Allyn & Bacon.

The editors provide an overview of various intervention approaches that can be implemented in group formats. The text is organized by topical areas, and interventions can be implemented by both consultants and mediators.

40 Best Practices in Instructional Consultation

Sylvia Rosenfield
University of Maryland

OVERVIEW

Instructional consultation is a stage-based problem-solving process that brings the school psychologist, as a consultant, and the teacher, as consultee, together to focus on school-based academic and behavioral concerns. Teachers bring concerns about students to the instructional consultant, as is typically done in other forms of school consultation. One of the unique aspects of instructional consultation, however, is the focus on academic concerns within an ecological framework. Although behavioral, as well as instructional, concerns are brought to the instructional consultant, appropriate academic progress is a pervasive consideration because of its centrality to the goals of schooling.

In this chapter, basic considerations will involve discussion of the essential assumptions underlying the practice of instructional consultation and of the training required. Next, best practices in conducting the instructional consultation process will be delineated. The following elements will be presented: the collaborative relationship and communication skills upon which instructional consultation is built, the stages of the process, a form useful in structuring the process, and the incorporation of the process into a service delivery model called instructional consultation teams (IC-Teams).

BASIC CONSIDERATIONS

In *School Psychology: A Blueprint for Training and Practice II*, Ysseldyke et al. (1997) recommend that school psychology practice should include the domains of interpersonal communication, collaboration and consultation, effective instruction, and development of cognitive/academic skills. These domains are blended in instructional consultation. Bergan and Schnaps (1983) described instructional consultation as behavioral consultation in situations designed to "modify teacher behavior to enhance the learning of all students in a class" (p. 105). Rosenfield (1987) extended the concept, developing underlying assumptions and incorporating content and skills into a stage-based problem solving process. The IC-Teams (Rosenfield & Gravois, 1996) is a delivery system to support implementation of instructional consultation. Because transformation to an indirect service delivery model requires systems change in most settings, the IC-Team model also incorporates knowledge about and skills in facilitating organizational change.

Underlying Assumptions

The perspective of the school psychologist in the role of instructional consultant is as critical to the process as are the strategies and techniques. Consultation is not a passive process. As White, Summerlin, Loos, and Epstein (1992) explicitly state, the "facts of a particular case are but a reflection of the values and prejudices of those persons describing that situation" (p. 350). The ecological perspective of instructional consultation differs significantly from that of the traditional medical model, requiring a collaborative focus "on the interactions between the student's entry level skills, the design of instruction, and the actual task the student is asked to perform rather than on a search for an internal deficit" in the student (Rosenfield, 1995, p. 320).

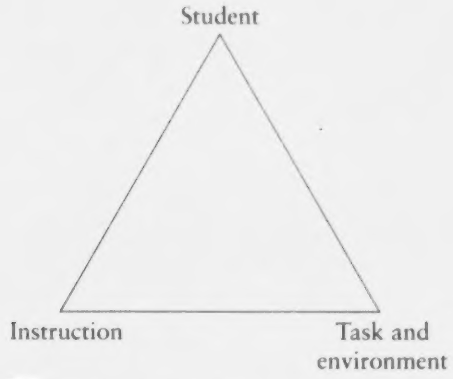
THE INSTRUCTIONAL TRIANGLE

Given that the context of schooling impacts on the individual learner and his or her adaptations to this environment, teacher concerns about students are viewed from the perspective of an instructional triangle (see Figure 1), consisting of the student, the task, and the instruction/management strategies. The learner is one component of the instructional system. The focus on the learner, however, is on alterable learner variables (Bloom, 1976), such as current behavior and academic entry level skills, rather than stable traits, such as intelligence.

Teaching objectives are operationalized by teachers into specific tasks for students, and these tasks comprise the second point of the triangle. Teacher expectations are generally based on successful completion of these tasks, and teachers evaluate student progress based on student performance of these tasks. However, it is not the task itself but the relationship, or match, between the tasks and the learner's skill level that is assessed in instructional consultation. A problem occurs when there is a gap between the expected performance level of the task and the student's skill level.

The instructional and/or management strategies used by those teaching the student are examined as the third point of the triangle. The importance of instructional design features on student learner outcomes has been confirmed in the empirical literature, most recently summarized by Kavale and Forness (1999). The instructional psychology literature (see, e.g., Ysseldyke & Christenson, 1993), as translated into instructional techniques acceptable in the consultee's classroom practice, are essential components of the instructional consultant's knowledge base.

Figure 1. The instructional triangle



From Gravois, Rosenfield, & Gickling, 1999.

THE LEARNING COMMUNITY

In addition to the assumptions inherent in the instructional triangle, the instructional consultant is committed to the assumption that creating communities for educators is essential to creating learning communities for students. The research literature (see, e.g., Fullan & Hargreaves, 1991; Rosenholtz, 1989) confirms that collaboration and consultation that support educators' reflective activities and professional development also are basic to the well being of their students. A teacher's referral is not viewed as a request to determine a student's disorder or as a prelude to special education placement. Rather, instructional consultants interpret a referral for consultation and collaboration as a normal function within a school community when either learning or behavior, or both, of a student or students are not progressing at an acceptable pace. This assumption is in contrast to how many schools operate, in which teacher isolation and individualism is the norm even when problems occur. Studies confirm that schools in which professional reflection and teacher collaboration (Fullan & Hargreaves, 1991) are embedded in the culture produce more effective academic outcomes.

DATA-BASED DECISION MAKING

Best practice in problem solving is data-driven. Gathering systematic classroom data for instructional decision making, which may not typically be part of the usual professional culture of teachers or the norm of most schools, is a required component of instructional consultation. School psychologists can play an important role in providing support and leadership in this area. Evaluation and accountability are expected (e.g., Stoner & Green, 1992) in all aspects of instructional consultation, even when using empirically supported interventions. Because it is not possible to determine the effectiveness of a specific intervention in any given case, baseline comparison and intervention data are necessary to determine the effectiveness of the intervention and/or the need to change the intervention design if there is a lack of progress.

Training in Instructional Consultation

Basic skills in school-based consultation are essential for school psychologists working as instructional consultants. These include ability to establish a consultation relationship and to conduct the stages of the consultation process. There is overlap in the skills of behavioral consultants, including defining concerns in observable and measurable terms, setting goals, collecting baseline and intervention stage data, graphing and charting, and data-based decision making about outcomes. For many classroom-based problems, behavioral interventions, either alone or in combination with instructional and management techniques, result in positive outcomes.

However, an additional set of attitudes, knowledge, and skills is required for effective instructional consultation. First, ecological assumptions must be a comfortable fit. School psychologists who view teacher concerns as a call to identify student disabilities can be resistant to assessing the instructional and management environment surrounding the teacher referral in the same depth as the student characteristics. Second, sound knowledge and skill in Curriculum-Based Assessment (CBA) techniques (e.g., Gickling & Gravois, this volume), and instructional design and classroom management interventions (see, e.g., Ysseldyke & Christenson, 1993), are essential. One of the professional development goals of instructional consultants is to build a repertoire of effective research based interventions in these domains.

BEST PRACTICES IN INSTRUCTIONAL CONSULTATION

There are several distinguishing characteristics of instructional consultation, although its stages are similar to behavioral consultation. In instructional consultation, special emphasis is given to relationship building, communication skills, and academic concerns.

Consultation Relationship

Collaborative consultation is defined as an "interchange between two or more professional colleagues, in a nonhierarchical relationship, working together to resolve a problem" (Rosenfield, 1987, p. 21). To facilitate problem solving, it is critical to establish a working relationship, one that allows the individuals involved to keep the problem-solving process going in spite of potential differences in interests, values, and perceptions (Fisher & Brown, 1988). Issues around the cost of seeking help and the processes for influencing consultees have been described in the literature and are applicable to the instructional consultation model as well (see, e.g., Rosenfield, 1987).

While both parties are responsible for the problem-solving outcomes, the consultant has the additional obligation to monitor and negotiate the quality of the relationship; thus, a discussion of the relationship is important early in the process. The capacity to build a working relationship is especially important in instructional consultation because of the focus on the whole instructional system rather than on finding and remediating a student's disability. Without a good working relationship, the participants' ability to work on curricular, instructional, and management issues would be severely diminished.

The school psychologist must also be perceived as authentic and trustworthy, developing these characteristics through interpersonal skills and effective communication strategies. It is often difficult for consultants "to balance their own perspective on the case with norms of good manners, desires to avoid any hint of disagreement or selfishness, and wishes to avoid confronting a colleague" (Rosenfield & Gravois, 1996, p. 25). These difficulties are compounded when teachers are asked to examine their instructional methods or to make changes in daily routines.

Communication Skills

Consultation is viewed, at its core, as a linguistic event, in which the problem and solution are constructed through dialogue (Rosenfield, 1999; White et al., 1992). The consultant functions as the architect of the dialogue, creating space for and facilitating the consultation conversation. Social psychologists inform us that speakers modify their descriptions of situations to take into account their perceptions about what their listeners want to hear, and the process of talking about a problem generates a sense of objectivity about it (Higgins, 1999). Thus, the conversation about the consultee's concerns must be carefully constructed. Consultants often are unaware how much their language affects the process. Structured reflection using tapes of their own consultation interviews is a powerful tool for alerting consultants to their use of language in the consultation sessions and its impact on the process.

Communication skills are central to establishing a collaborative working relationship and constructing the problem in a form that school staff find meaningful and resolvable within their own professional role. Medical model diagnosis can result in a teacher's believing that only a specialist can address the disorder. In contrast, a problem defined in terms of classroom learning objectives and behavior is viewed by teachers as functionally related to their role. Thus, specific behaviors and skills are the focus of the consultation sessions, since there is evidence that the focus of the problem identification affects the teacher's beliefs about whether the problem can be resolved at the classroom level. According to Tombari and Bergan (1978), teachers felt more empowered to resolve a problem when they were asked to respond to questions about behavior rather than more medical model cues.

In developing a collaborative relationship, question asking is downplayed, because of its expert orientation, and alternatives to questions are emphasized (Rosenfield, 1987). Clarity of communication is essential because generalities or ambiguous phrases are common in problem identification interviews. For example, a teacher may describe a student as having attention problems. Through clarifying comments, such as, "an example of that would help," the teacher is able to describe the behavior that led to the inference about the student's problem. Helping teachers to move down the "ladder of inference" (Argyris, 1990) from labels to behavior is a key aspect of communication. Paraphrasing of the consultee's statements is also helpful as a check that the consultant's understanding of the consultee's message is congruent with what was intended and affords an opportunity to correct the received message. Paraphrasing also provides the teacher with the chance to reflect on the message through hearing it again, a rare opportunity given how little time is provided on a regular basis in the schools for such reflection.

It is essential for instructional consultants to be aware of the language that they use in the consultation process. In educating instructional consultants, supervisors consistently find that new consultants are unaware of what they have actually said (as different from what they intended to say) and of the impact of their language on the consultee. All consultants should have multiple opportunities during their training, and periodically thereafter, to tape some of their consultation sessions so that they can reflect on and improve their use of language and communication skills.

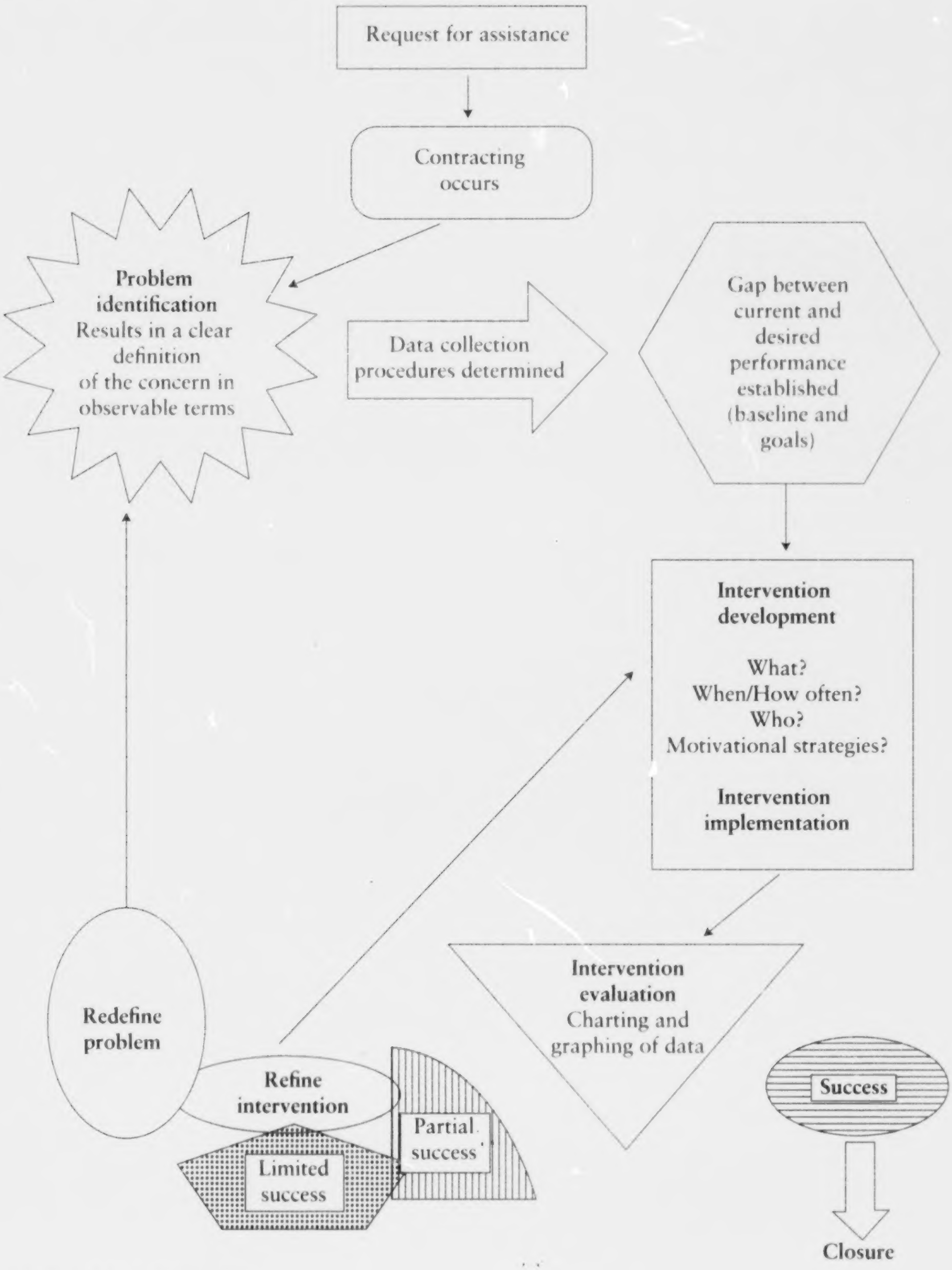
Problem-Solving Stages

The stages of problem solving in instructional consultation are entry and contracting, problem identification and analysis, intervention planning, intervention implementation, and resolution/termination. The stages serve as a scaffold for the problem-solving process, and each stage has tasks that need to be accomplished before the next stage can be addressed. Failure to complete the tasks required at each stage can diminish the effectiveness of the process. While the stages are described in a linear fashion (see Figure 2), it is not unusual to return to an earlier stage if the situation changes or if it is recognized that there has been a breakdown in the process. For example, if it becomes apparent that the teacher's expectations about the process are not being met, the consultant and consultee should return to the contracting stage and renegotiate the consultation contract.

ENTRY AND CONTRACTING

Introduction to consultation takes place at two levels, the school and the individual teacher. *Entry* refers to the process of introducing instructional consultation to administrators, staff, and parents in the school as a major component of the school psychologist's service delivery model. Practitioners have accomplished this through presentations at staff meetings and through written materials, including brochures and newsletters for teachers and parents. As part of entry, information is provided about the referral procedure through which staff accesses the consultation services. Referring a concern should be easy for the consultee, usually consisting of a one-page request for consultation with an indication of the teacher's available time periods. It is not considered a student referral so much as a request for support or consultation about a stu-

Figure 2. The problem-solving process


Request for assistance
Contracting occurs
Problem identification
Results in a clear definition of the concern in observable terms
Data collection procedures determined
Gap between current and desired performance established (baseline and goals)
Intervention development
What?
When/How often?
Who?
Motivational strategies?
Intervention implementation
Intervention evaluation
Charting and graphing of data
Success
Closure
Partial success
Limited success
Refine intervention
Redefine problem

From Gravois, Rosenfield, & Gickling, 1999.

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dent or set of students in the teacher's classroom. The first consultation session should be scheduled soon after the referral is made. It should be noted that to implement the IC-Team model, systems level entry is also advised (Rosenfield & Gravois, 1996).

Introduction of instructional consultation at the school level does not absolve the school psychologist from the requirement of *contracting* with the individual teacher consultee. Contracting provides the consultee with the ground rules that govern the consultation relationship and problem-solving process. It concludes with an explicit decision about whether or not to engage in the problem-solving process. Contracting can be considered a method to obtain informed consent to proceed.

The business of contracting involves the following:

1. Informing the consultee about the stages of the problem solving process
2. Explaining the instructional triangle (with its focus on alterable student variables, instructional methods, and tasks in the classroom)
3. Clarifying the collaborative nature of the relationship
4. Discussing time involvement
5. Explaining data collection
6. Discussing the limits of confidentiality and the non-evaluative nature of the process (before engaging in consultation, it is critical for the consultant to clarify the school/school district policy on student and teacher confidentiality, so that the teacher can be accurately informed)
7. Concluding with a joint decision to move forward, including scheduling time and place, or to discontinue meeting

Decisions about the role of parents in instructional consultation must be made at the school or district level. Some consultants and schools view consultation as providing an opportunity for teachers to obtain support for a problem with some aspect of the instructional triangle in their classroom; and others insist that any discussion about a student, even regarding classroom instructional modifications, must be predicated on parental notification and/or permission. In schools in which IC has been implemented, teachers report being able to engage in more productive dialogue with parents after engaging in instructional consultation. Rather than focus on the student's problems, they can base their discussions with parents on more specific academic concerns and behaviors, have useful data to share, have set specific goals, and may have introduced instructional modifications matched to the student's skill level. At all times, the culture of the school with respect to parent involvement needs to be clear to the consultant and respected.

PROBLEM IDENTIFICATION AND ANALYSIS

After there is a joint decision to engage in the problem-solving process, the stage of *problem identification and analysis* begins. The instructional consultant does not assume that the initial description of the problem is an adequate representation, but rather that the participants will co-construct the problem through their dialogue and data collection. The outcome of this stage is problem setting, framing problems in terms of current versus desired performance. The concern should be meaningful to the participants and respectful of their perspectives, but amenable to allowing change to occur in components of the instructional triangle.

Care is taken in the language used in this stage to avoid diagnostic and clinical jargon, and to focus first on the presence or absence of behaviors that led the teacher to decide that a referral was needed. Teachers often attune their concerns to their listeners, and school psychologists, for example, are often more prone to be told that the student may have an attention deficit disorder than to hear about a problem in learning phonics, although behaviors related to both may be present. Reframing the initial, often global, concern to specific behavior(s) also can have the effect of leading teachers to feel more empowered to resolve the problem, as suggested above.

The business of this stage can take several sessions, depending in part upon the information that the consultee brings to each session. The goal is to:

1. Identify the teacher's concerns in observable and measurable terms, and define it in terms of a "gap" between current and expected performance.

2. Select a data collection method and establish a baseline.

3. Identify the antecedent and consequent conditions in the context in which the behavior or academic performance problem occurs; that is, a functional analysis is appropriate whether the concern is a classroom behavior or an academic performance problem (Daly, Witt, Martens, & Dool, 1997).

4. Establish short- and long-term goals for the student.

Problem identification is accomplished through the dialogue conducted during the consultation sessions, and through carefully designed assessments, usually involving CBA and behavioral observation techniques. The goal of assessment is to identify whether there is a gap between the student's current and expected performance, as defined by the teacher, and determine if that gap is significant. Thus, defining a gap requires that the referral source have clear expectations for the student and can identify the student's skill level with respect to those expectations. Assessment strategies are designed to supply information about the student's entry-level skills or behaviors, the task, and the instructional/management strategies in use.

A critical feature of instructional consultation is the requirement that an instructional mismatch be ruled out, even when the teacher's presenting concern is behavior. Thus, for example, if the teacher reports that the student is not completing the work or is constantly interfering with the work of other students, the first hypothesis to be tested is the appropriateness of the tasks assigned in relation to the student's entry skills. The requirement for an academic assessment is predicated on the assumption that students who are working at frustration level in the classroom instructional setting can be prone to behave inappropriately as well.

The teacher and consultant establish whether the student is given tasks that match his/her entry-level skills through the use of CBA strategies. CBA is defined as "a system for determining the instructional needs of a student based upon the student's ongoing performance within existing course content in order to deliver instruction as effectively and efficiently as possible" (Gickling, Shane, & Croskery, 1989, pp. 344–345). Surprisingly, "most teachers either do not take the time or do not know how to make good use of assessment in presenting instruction, in evaluating it, and in making it more effective and meaningful" (Stiggins & Conklin, 1992, p. 148). Instructional assessment is thus an essential tool within the problem identification stage. CBA addresses five basic questions: What does the student know? What can the student do? What does the student think? How does the student approach what he or she is unsure of? What can the teacher do next? (For additional information on assessment and intervention techniques growing out of CBA, see Gickling & Gravois, this volume).

Behavioral observation techniques in the classroom or school setting are routinely used by school psychologists, but instructional consultation also requires that relationship issues are considered in the planning of observations and in providing feedback about the data. It is important for teacher and consultant to reflect together on the specific purpose of the observation with regard to the teacher's concern, and to develop strategies that minimize bias and facilitate the decision-making process. The consultant needs to involve the consultee in interpreting the data. Most school psychologists are willing to conduct classroom observations when a referral is made, but it is often valuable to have the teacher do the observation. Simple observation techniques that can be maintained by the teacher during the intervention stage are particularly helpful in facilitating data collection through the intervention stage of consultation, and in helping the teacher in gaining a more objective perspective on the concern.

Data from the assessment are compiled in a graph or chart format. A baseline on the behavior/academic skill of concern is established. While technical perfection in data collection is not always the case, over time teachers and consultants seem to develop a healthy respect for the process, and recognize that the graphing and charting of data are essential components.

INTERVENTION PLANNING

Intervention planning is facilitated by successful completion of the problem-identification stage. Teachers are often able to develop interventions when they have a clear definition of the problem and data to support the picture that has been constructed. Labeling a student's reading problem as a learning disability often is interpreted by the teacher to mean that the student requires the services of a special education teacher. On the other hand, recognizing that the student's reading problem is the result of insufficient knowledge of phonics can enable the teacher to accept empirically supported strategies, tailored to fit the classroom context, to teach phonics skills. Failure to complete independent seat work can be labeled an attention disorder. Again, an alternative hypothesis can be developed if assessment reveals that the work is not at instructional level. Then the teacher can develop tasks to better match the student's skills.

This stage is completed only when the details of the intervention are described and the implementation of the intervention is seen as realistic and reasonable by those responsible for conducting it. The planning requires that the following questions be answered:

1. What is the description of the strategy?
2. When and how often will it be implemented?
3. By whom will the intervention be implemented?
4. What materials are required and are they currently available? (If not, how will they be obtained?)
5. What data collection methods will be used to evaluate progress toward the student's goals?
6. When will progress be monitored?

To the extent possible, intervention selection is based on utilizing effective, research-based, instructional, and classroom management strategies. However, research evidence does not guarantee effectiveness in any given case, and many strategies need to be tailored to the demand of a particular classroom setting or student situation. For example, in developing behavioral interventions, the technique of contracting is highly effective; but an effective contract may not be constructed on the first attempt. Building a student's sight word vocabulary may require modification of the number of new words introduced per lesson and the type of reinforcement used. Instructional consultants share with consultees the understanding that the first intervention plan may need to be modified and that decisions about modifications will be based on the data gathered to monitor progress toward goals.

INTERVENTION IMPLEMENTATION

The feasibility and effectiveness of an intervention are put to the test in the *intervention implementation* stage. The beneficial effect of creating a collaborative working relationship on treatment implementation has been documented (see, e.g., Vaughn, Hughes, Schumm, & Klingner, 1998). Collaboration during this stage is an asset in resolving the inevitable practical problems that arise during implementation, coping with treatment integrity issues, and supporting data collection on the effectiveness of the intervention. Consultants should be prepared for problems in these areas rather than view them as evidence of teacher resistance. While sessions are typically less frequent during this stage, meetings to evaluate progress and treatment integrity should be scheduled at regular intervals.

RESOLUTION/TERMINATION

Formal closure of the problem solving process and the working relationship (at least about this particular case) is the final stage. Whether or not the problem has been resolved to the satisfaction of all parties, accountability requires a *resolution/termination* stage, where the decision to continue or terminate is made. If the goals have been achieved and the problem is resolved to the partners' satisfaction, then there is the opportunity to celebrate the achievement. The procedure for re-accessing the consultant should be clarified should new concerns emerge.

If there is not progress toward goals when the data are reviewed, then it may be necessary to recycle back through the stages. For example, a more clearly defined behavior or additional data collection may be needed. Alternatively, a decision to access other resources can be made, including a support team in the building, or involvement of, other staff (either internal to the school or in the community) or family members. Special education referral may be considered if that is the most direct way to access needed resources.

If the teacher decides not to continue in the relationship, then formal termination of the process should occur. Consultation relationships can fade away through the press of time, personal concerns (such as an illness in the teacher's family), unwillingness to confront relationship issues, or perceived or real lack of progress in resolving the referral concern(s). It is important to explicitly address the reason for the teacher's withdrawal, and to terminate the process while leaving the door open for future opportunities to consult on the current or other concerns.

Documentation is required for accountability in all situations. The consultee should be a partner in constructing and completing the records. Rather than a formal report written by the consultant, documentation for the teacher should be a brief summary of the concern, relevant assessment data, a description of the interventions implemented, and the results. A summary form with instructional and management recommendations can be prepared for the student's next teacher (see Figure 3 for an example of such a form). Records should be maintained in the event of future concerns about a particular student, with culling of outdated records when appropriate. For consultant accountability, it is important to examine how many consultee concerns are successfully addressed during the school year.

Student Documentation Form

The Student Documentation Form (SDF) is designed to structure and provide accountability for the instructional consultation process. This four-page folder, printed on heavy paper stock, is useful for moving through the stages in a systematic manner. The cover page (see Figure 4) enables the consultant to structure the problem identification stage by

1. Eliciting the concerns in general terms
2. Helping the consultee to prioritize the concerns
3. Requiring an examination of instructional match between the student's skills and the classroom tasks
4. Setting short and long-term goals

Inside the SDF there are two identical facing pages (see Figure 5) that provide a place to

1. Identify the behavior
2. Chart and graph baseline and intervention data
3. Assure that the major intervention design components have been addressed

The back cover (see Figure 6) provides a log form for sessions. After an evaluation of an earlier version of the SDF (Moniodis, 1996), the current format was developed, based on these results, in collaboration with psychologists, teachers, and administrators implementing IC-Teams.

IC-Teams

The instructional consultation process has been embedded in a delivery system called IC-Teams. IC-Teams (Rosenfield & Gravois, 1996) is a structured school-wide problem-solving team model that is based on the assumptions and process of instructional consultation. Individual team members are trained as instructional consultants and work with teachers in the school building. In addition, IC-Teams, as a program model, includes specification of the functions of the team, a process by which school staff can access the team as a resource and procedures for accountability.

There is a process described for implementation of the team model, based on the school change literature, and described in Rosenfield and Gravois (1996). A training program for both team members and team facilitators has been designed, and there is an evaluation process for the team that includes a level of implementation measure, the IC-Team LOI-Revised (Fudell, Gravois, & Rosenfield in Rosenfield & Gravois, 1996, Appendix A). Most of the IC-Teams currently operating have school psychologists as their facilitators.

An essential component of IC-Teams is the emphasis on data collection from the level of individual cases to program evaluations. Program evaluation data have been collected on outcome variables, including student goal attainment, reading achievement outcomes, special education referrals and placements, and time use patterns. Process variables have also been examined, including level of implementation, effectiveness of training, and school staff satisfaction. For each school system in which IC-Teams have been implemented, yearly reports are provided to the school district on a selected number of these variables, using charts, graphs, and narrative summaries. These reports have been used within schools to plan training for teams and by the district administrators and boards of education to determine funding and expansion of the teams. (A bibliography and set of sample reports are available from the author.)

Figure 3. Instructional consultation articulation form

Student Support Team
Instructional Consultation Summary

Student Name: ______________________ Teacher: ______________________

Grade: ______________________ Date of Summary: ______________________

Instructional Consultation is a problem solving process used by the Student Support Team to assist school personnel in adjusting instruction and in adapting the educational environment to benefit staff and students.

Problem Identified: ______________________

Interventions developed and implemented: ______________________

Results of interventions: ______________________

Implications for teaching strategies: ______________________

The teach and IC case manager recommend continuation of intervention for the _______ school year.

Consultation was terminated on the following date ____________ due to student progress.

Referring Teacher ______________________

IC Case Manager ______________________

Note: All IC student folders are kept in file cabinet at

cc: IC Student Folder

Figure 4. Student documentation form, goal attainment scale

Instructional Consultation Student Documentation Form

Student's Name ________ Grade ____ Date of Birth ________ Date Started ________

Teacher's Name ________ Case Manager ________ School ________

Goal Attainment Scale (GAS)

Step 1: Initial description of concern				
Step 2 Prioritize	**Importance** 1 2 3 4 (student at instructional level? Y N)	**Importance** 1 2 3 4 (student at instructional level? Y N)	**Importance** 1 2 3 4 (student at instructional level? Y N)	**Importance** 1 2 3 4 (student at instructional level? Y N)
Step 3: Observable/measurable statement of current performance (following baseline)	Date collected ______	Date collected ______	Date collected ______	Date collected ______
Step 4: Interim goal: Expected performance in ____ weeks (4–6 weeks)	Date consistently attained ______	Date consistently attained ______	Date consistently attained ______	Date consistently attained ______
Step 5: Interim goal: Expected behavior in ____ weeks	Date consistently attained ______	Date consistently attained ______	Date consistently attained ______	Date consistently attained ______
Step 6: Long-term goal: Expected behavior in ____ weeks	Date consistently attained ______	Date consistently attained ______	Date consistently attained ______	Date consistently attained ______

Figure 5. Student documentation form, operational definition of academic/behavioral performance, graph, and intervention plan

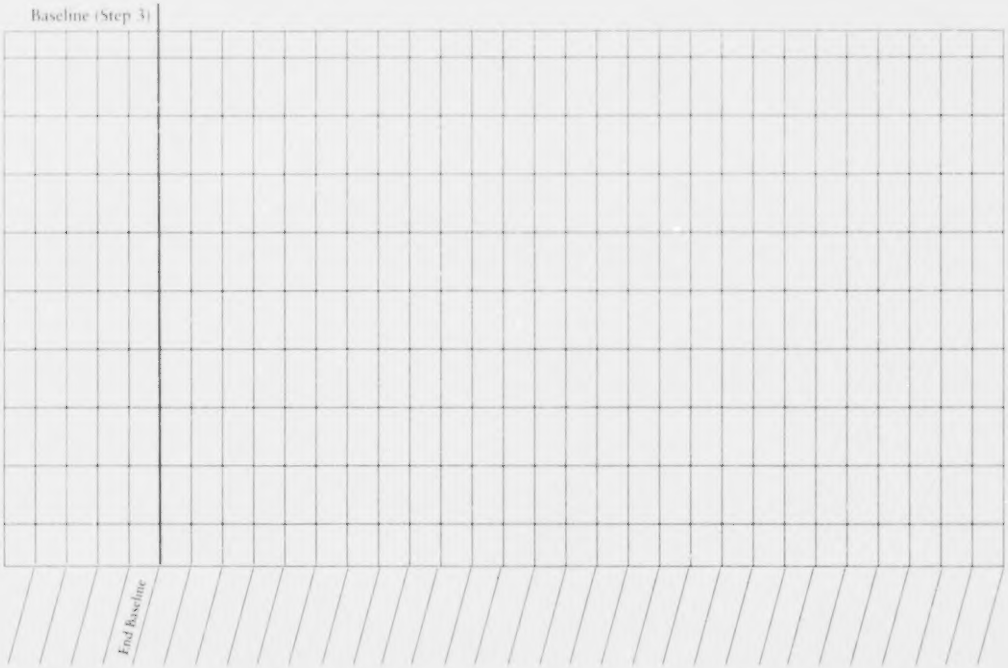
Operational Definition of Academic/Behavioral Performance: Priority #________
on GAS

KEY
☐________
☐________
☐________

What specific academic/behaviors will be recorded? ____
____

When will the behavior be recorded? ____

Where will the behavior be recorded? ____



Describe intervention design and materials	When and how often?	Persons responsible?	Motivational strategies?

IC-Teams are generally implemented in elementary schools, although a similar model has been extended to middle school settings as well . At the middle school, an IC-Team consultant typically works on a regular basis with grade-level teams to implement the problem-solving process, bringing the assumptions and techniques of instructional consultation to the teachers as they discuss student issues.

SUMMARY

Instructional consultation is a stage-based problem-solving model that connects the collaborative consultation process with the knowledge base in academic assessment and classroom instruction, particularly as it is applied to concerns of teachers about student learning and behavior. The underlying assumptions

Figure 6. Student documentation form, log form

Date	Summary of Meetings	Follow-up Activities	Next Meeting Date and Time

are ecological in nature and focus on the instructional triangle of alterable student variables, instructional tasks, and instructional design. Each of these variables are assessed in relation to each other to determine if there is a gap between the student's current and expected performance as well as a functional analysis of the cause.

School psychologists functioning as instructional consultants have basic school consultation skills. In addition, they must be comfortable with the ecological assumptions described above. Although similar to behavioral consultants in their training, the instructional consultant must also be knowledgeable about academic assessment and the domains of instruction and classroom management.

The instructional consultation process relies on the school psychologist's ability to build a working relationship with the teacher through interpersonal skills and good communication strategies. The consultation process involves specific stages of problem solving, each with its own tasks. The stages include: entry and contracting, problem identification, intervention planning, intervention implementation, and resolution/termination. When the concern has not been resolved, the stages can be recycled or additional resources accessed.

Data-based decision making is central to instructional consultation. To this end, documentation of the process is critical for accountability. The SDF, developed in collaboration with school personnel, provides a format for this process, and also helps to structure the problem-solving stages.

In recognition that schools as organizations often require greater structure for service delivery, the IC-Team model, in which the instructional consultation process is embedded, was developed. School psychologists have become valued facilitators of these teams, but facilitation requires skills in teaming, evaluation, and implementation of school change.

Instructional consultation brings school psychologists into contact with the daily classroom concerns of teachers. It is a collaborative process that provides services that affect teacher behavior and student progress.

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An essential tool for instructional consultants is CBA. The major type of CBA used by instructional consultants is described in this chapter, and the basic assumptions and strategies are presented.

Rosenfield, S. A. (1987). *Instructional consultation.* Hillsdale, NJ: Erlbaum.

The text provides the foundation for instructional consultation. It introduces readers to an extensive, step-by-step description of the instructional consultation process, providing case material, resources, and materials available to foster the consultation process.

Rosenfield, S. A., & Gravois, T. A. (1996). *Instructional consultation teams: Collaborating for change.* New York: Guilford.

This book covers both the content and the process of creating consultation-based services for students, staff, and school communities through implementation of IC-Teams. It describes the instructional consultation model, followed by a discussion of the role of the change facilitator and the stages of change. Individual chapters are devoted to initiating, training, implementing, and institutionalizing IC-Teams.

Ysseldyke, J., & Christenson, S. (1993). *The instructional environment system (TIES)-II.* Longmont, CO: Sopris West.

Instructional consultants must have a solid understanding of effective instructional design. The TIES presents an overview of the knowledge base in instruction and management, and presents some tools to evaluate a student's instructional setting.

41 Best Practices in School Consultation

Joseph E. Zins
University of Cincinnati
William P. Erchul
North Carolina State University

OVERVIEW

Consultation has become one of the primary job functions of many school psychologists (Reschly & Wilson, 1995). This trend in practice is supported by a mounting body of empirical evidence demonstrating the efficacy of consultative services (e.g., Sheridan, Welch, & Orme, 1996), although there continues to be great need for further research on all aspects of the process.

Our goal in this chapter is a very practical one. We intend to present essential information about what is needed to be an effective school consultant. Although considerable theoretical and empirical literature is cited, our intent is not to provide a thorough review of it, because that information is available elsewhere (e.g., Erchul & Martens, 1997; Zins, Kratochwill, & Elliott, 1993). Further, we assume that most readers already have at least a basic-level understanding of consultation. For those who wish more detail than can be provided in this brief chapter, several recommended references are listed in the annotated bibliography.

The chapter begins with a presentation of our conceptualization of consultation along with the prerequisite competencies and assumptions underlying practice. Practical guidelines for best practices in consultation are discussed, including a description of consultative problem-solving steps. The chapter concludes with a review of individual and organizational factors that may exert influence on the consultation process.

BASIC CONSIDERATIONS

Several approaches to consultation most frequently employed in the schools have been described in the literature: the behavioral, mental health, and organizational. Although universally accepted definitions for these approaches do not exist, and the models were not specifically developed for practice in the schools, they have a number of elements in common. For instance, all stress the use of problem solving as the mechanism through which consultative interventions are developed, focus on work-related problems, and view participation in the process as voluntary. However, they differ in aspects such as the roles and relationships of consultants and consultees, the focus of consultative interventions, and the organizational level at which they are implemented. Despite the differences and lack of agreement in definition, the approaches are more similar than different, and consensus is emerging regarding key elements of the process (Zins et al., 1993).

The approach to consultation described in this chapter borrows heavily from a variety of models, but theoretically is most closely aligned with the ecobehavioral approach, which combines the behavioral and ecological/systems paradigms (Gutkin, 1993). It emphasizes the application of behavioral technology, and utilization of the broad-based ecological/systems perspective. We have extracted the most salient aspects of a number of prior works, added some new ideas, and synthesized this information into a coherent framework specific to practice in the schools.

Schools are different from other settings such as hospitals, correctional facilities, or business organizations, and because context is such an important aspect of consultation, it is desirable to limit the focus to school consultation. Such an approach also provides the latitude to review briefly the various types of consultation that occur within schools, including consultation with individual teachers and parents, with groups of consultees, and system-wide consultation directed toward changing entire educational organizations.

Definition of School Consultation

In this chapter, school consultation is defined as *a method of providing preventively oriented psychological and educational services in which consultants and consultees form cooperative partnerships and engage in a reciprocal, systematic problem-solving process guided by ecobehavioral principles. The goal is to enhance and empower consultee systems, thereby promoting students' well-being and performance.* A brief explanation of the essential components and underlying assumptions of this definition follows. Ideas from many sources form the basis of this discussion, and it is difficult to attribute original responsibility for many of the concepts. As Gutkin and Curtis (1999) noted, these ideas have now been so widely discussed that they are now part of the basic assumptions typically made about consultation (although not all have been validated empirically).

PREVENTIVE-ORIENTATION

Consultation has a dual focus. Consultation provides a mechanism through which the presenting problem is remediated, and, secondarily, it attempts to increase consultees' skills and alter environmental variables and setting events that elicit and maintain problematic behaviors. These procedures are intended to prevent problems from becoming more severe and to keep additional ones from arising.

The first goal is met by developing specific, empirically based interventions to deal with the presenting problem. The second is accomplished in a less direct manner by (a) ensuring that the consultant's expertise is readily available to the consultee system through encouragement of frequent interactions between consultants and consultees to facilitate the prevention and early identification of problem behaviors; (b) improving consultees' skills and knowledge so they can more effectively address similar problems in the future; (c) maintaining a systems perspective so that the broad array of conditions that might contribute to problem development, maintenance, and resolution are considered and can be addressed; and (d) developing and implementing primary and secondary prevention programs. In most cases, it is necessary for consultees to solve several problem situations successfully with the consultant's support before the consultees apply those procedures independently, as the literature suggests that training to a single exemplar is ineffective as a means of promoting generalization (Stokes & Baer, 1977). Even when consultation is applied in a clearly rehabilitative fashion, a primary intent is to minimize the possibility that more serious problems will arise. In practice, this preventive goal is not accomplished as often or as easily as the first; nevertheless, it should be pursued to enhance the overall value of the consultation process (Zins, 1995).

The increasingly preventive focus of consultation gradually is shifting the focus from individual children to entire systems; that is, classrooms, schools, school districts, the larger community, and even relevant state and federal policies, regulations, and legislation (Swift & Cooper, 1986). Practitioners, who are often frustrated by the limitations of focusing interventions on individual children, now are recognizing the potential efficacy and long-term benefits of wide-scale interventions (see Perry et al., 1996, for illustration).

METHOD TO PROVIDE SERVICES

Consultation is one means by which psychological and educational services are provided, or what Miller (1969) might describe as another way of "giving psychology away" to non-psychologists. Indeed, consultation is the foundation or overarching framework from which all other services are delivered and around which all other services are organized. The goal is to help clients (usually students) and the consultee system. Students are assisted indirectly through the process, in contrast to the direct method of providing service traditionally associated with psychoeducational assessment or counseling, recognizing that there is a need for both types of services, and that even with a direct service such as individual crisis intervention, consultation with teachers and/or parents usually is provided. Further, techniques such as modeling, direct instruction, and behavioral rehearsal, which involve direct interactions with clients (children) and/or consultees, may also be appropriate to ensure that consultees learn the skills. As noted later, it is essential for consultants to remain available for follow-up assistance and support for interventions that are developed. The important point is to assist in resolving the problem rather than rigidly adhering to certain roles. For example, direct training of consultees in problem solving skills (Zins & Ponti, 1996), or having consultants model particular behaviors (Watson & Robinson, 1996), have been demonstrated to enhance effectiveness and improve integrity.

COOPERATIVE PARTNERSHIP

Consultants and consultees work together to solve problems, and it is highly desirable for them to do so within a relationship that emphasizes trust, openness, and a sharing of responsibilities and expertise. We term this relationship a "cooperative partnership." *Cooperative* implies that (a) participants work jointly on as equal a basis as possible (realizing that their levels of need are unequal and their areas of expertise are often divergent), and (b) they have different contributions to make and varying responsibilities to uphold to maximize consultation effectiveness. *Partnership* implies that these responsibilities are clearly specified and mutually agreed-upon to facilitate progress toward common goals.

In terms of specific responsibilities, consultees must provide contextual, ecological information to help define problems and develop interventions. They also must assist in determining what interventions can be implemented in their setting and within their repertoire of skills. In addition, all participants have responsibility for defining and analyzing problems, for establishing and maintaining the cooperative partnership, and for conducting follow-up activities.

Although consultants and consultees both contribute to problem solving, consultants structure and guide the overall process, while consultees supply much of the content of the discussion. Consultant attempts to direct the course of consultation interviews have been linked to a variety of positive outcomes (e.g., Fuchs, Fuchs, Bahr, Fernstrom, & Stecker, 1990), but consultee attempts to control the direction of interviews generally have been associated with more negative outcomes (e.g., Erchul & Chewning, 1990). However, because consultees (a) retain responsibility for the client, (b) can best judge treatment acceptability, and (c) usually implement most interventions and thus can ensure treatment integrity, they are in a better position to make final decisions regarding intervention implementation. Because the latter point is also a potential problem (Gutkin & Conoley, 1990), it is incumbent on consultants to work with consultees to ensure that these decisions are made in an informed and carefully thought-out manner. Consultants also have primary (but not sole) responsibility for (a) ensuring that the atmosphere remains non-evaluative, (b) identifying and presenting interventions for possible implementation in many cases, and (c) developing the evaluation plan. Within the cooperative partnership, then, possibilities are increased so that more creative solutions to problems will emerge, consultee ownership and commitment to carrying out interventions will be enhanced, and consultee self-efficacy will be improved.

Finally, key to understanding the cooperative partnership is to avoid catching the "egalitarian virus" (Barone, 1995). In explaining his failure to challenge a teacher's claim that "peanut butter cures attention-deficit hyperactivity disorder" (p. 35), school psychologist Stephen Barone proposed that a disease he termed the "egalitarian virus" paralyzes otherwise competent professionals, causing them to wither in the face of strong—but not necessarily informed—opinions. According to Barone, unrealistic ideas regarding the display of expertise permeate public education today; these include the beliefs that the specialized expertise of each staff member is directly interchangeable with that of any other, and that any person's opinion should be afforded *equal* rather than *due* consideration. The implication for consultants who engage in cooperative partnerships is to act as content experts when necessary and to not downplay their specialized knowledge but, at the same time, to attempt to understand and appreciate the unique strengths and weaknesses consultees bring to consultation.

RECIPROCAL INTERACTIONS

The principles regarding the reciprocal nature of consultative interactions are derived from Bandura's (1977) social learning theory and philosophy of reciprocal determinism. Indeed, these two paradigms serve as an overarching "meta-theory" underlying consultation practice (Zins, 1988). Unidirectional influence approaches usually have predominated the interactions between psychologists and those they seek to assist (Tyler, Pargament, & Gatz, 1983), but they do not adequately reflect the complexity of the consultation process. According to Bandura's model, consultants', consultees', and students' functioning result from the continuous and reciprocal interactions among behavioral, personal, and environmental factors. During the interpersonal exchanges that constitute consultation, participants draw from available power bases and exert influence on one another and their beliefs, attitudes, and behaviors can be altered as a result (Erchul & Raven, 1997; Reardon, 1991). The challenge for consultants is to maintain a cooperative partnership while at the same time exerting interpersonal influence, and only recently have some researchers agreed that the consultation relationship can be simultaneously collaborative and directive (Erchul, 1999; Gutkin, 1999a, b). Consultants accomplish this dual goal by establishing an atmosphere of mutual respect and trust, and by moving the process along through appropriate interviewing techniques. Consultees influence consultants primarily by specifying the assets and constraints of their role, the students, and the setting. Students likewise influence consultants and consultees as well as the entire system. "Therefore, understanding and changing the functioning of a consultee or client must focus on the interlocking relationship of these three [behavioral, personal, and environmental] factors, not on a single dimension" (Brown & Schulte, 1987, p. 283).

SYSTEMATIC PROBLEM-SOLVING PROCESS

Problem solving proceeds through an orderly, systematic sequence of steps, as discussed in detail later in the chapter (see Table 1), and the process is dynamic, evolving, flexible, and cyclical in nature (Kurpius & Lewis, 1988). The consultant guides the overall process, but the active, joint involvement of all participants is essential to maximize the potential that successful solutions will be developed and implemented. Moreover, formal, written documentation is kept regarding intervention development and outcomes in order to foster follow-up efforts and to increase accountability.

Table 1. Consultative problem-solving process

Establishment of cooperative partnership

- Promote understanding of each other's roles and responsibilities
- Avoid the egalitarian virus

Problem identification and analysis

- Define problem in behavioral terms and obtain agreement with consultee
- Collect baseline data regarding problem frequency, duration, and/or intensity and conduct task analysis as needed
- Identify antecedent determinants of the problem behavior
- Identify consequences that may maintain the behavior
- Assess other relevant environmental factors
- Identify all available resources

Intervention development and selection

- Brainstorm range of possible interventions
- Evaluate the positive and negative aspects of the interventions
- Select intervention(s) from the alternatives generated

Intervention implementation, evaluation, and follow-up

- Clarify implementation procedures and responsibilities
- Implement the chosen strategy
- Evaluate intended outcomes and any side effects
- Program generalization, plan maintenance, and develop appropriate fading procedures
- Recycle and follow-up as necessary

ECOBEHAVIORAL PERSPECTIVE

The behavioral paradigm has dominated the consultation field in recent years, but ecological/systems theories are now offered as a means of expanding traditional behavioral approaches (Gutkin, 1993). Both make important contributions to understanding the process.

Behavioral theory provides the experimental rigor and methodology necessary to concisely identify and measure problems, analyze forces influencing problem situations, and evaluate intervention outcomes. In addition, there is an extensive array of behavioral interventions with documented success available for implementation through the consultation process (Elliott & Busse, 1993).

Ecological and systems perspectives offer a useful framework for more broadly conceptualizing the setting or organizational context within which consultation occurs, and they expand the goals of traditional case-centered consultation. The connection between a problem and the system variables that may be contributing to it or preventing its resolution must be examined. This perspective widens the focus beyond the individual child to also include peers, family, teachers, classrooms, curricula, schools, community, other system levels, and so forth. Consequently, a wide array of factors that may be contributing to the problem is always considered in identifying problems and in developing interventions.

MEANS OF EMPOWERMENT

The empowerment philosophy in contemporary consultation "requires different assumptions and behaviors on the part of the consultant than does traditional case-centered problem solving" (Witt & Martens, 1988, p. 213). This ideology recognizes more explicitly that consultees and consultee systems already possess or readily can develop most competencies necessary to deal with student- and system-related problems, given the right opportunities and knowledge of available resources (Rappoport, 1981). They have a basic level of competence, but not necessarily the technical knowledge or skills to solve a particular problem. Thus, consultees' failure to solve problems is often a reflection of the system's failure to create opportunities or to provide support for the consultee to exhibit these skills, rather than simply an indication of their lack of knowledge about how to deal with the problem. The implications for consultants are significant. Their role becomes one of helping consultees to clarify needs and locate resources, and of ensuring that opportunities are available to enable consultees to engage in self-sustaining behaviors to resolve problems. Cast in social power terms, consultants need to harness their own power to enable consultees to be more powerful and influential (Erchul & Martens, 1997).

ENHANCEMENT OF STUDENT WELL-BEING AND PERFORMANCE

Although consultation usually focuses on improving consultees' skills and performance or changing their behavior, the ultimate beneficiary is always intended to be the student. To arrive at this goal, however, it is often appropriate for the entire school district or some segment of it to be the initial target of change, as in an organization development program (e.g., Ikeda, Tilly, Stumme, Volmer, & Allison, 1996). At other times, the focus might be even broader and involve interagency collaborations (e.g., McMahon, Ward, Kline Pruett, Davidson, & Griffith, 2000).

OTHER CHARACTERISTICS IMPLICIT IN DEFINITION

The problems addressed are always *work- or care giving-related* rather than personally focused as in counseling. In addition, material discussed is considered *confidential* by consultants, consultees enter into consultation *voluntarily*, and the consultative relationship is *temporary*. Gutkin and Curtis (1999) have discussed these issues as well as other core characteristics of consultation in great detail.

Prerequisite Competencies and Assumptions of Consultation Practice

In addition to a general knowledge of psychological principles and techniques (e.g., human learning, ethics, social bases of behavior, systems theory, research methodologies) and a familiarity with the educational system (e.g., teaching strategies, school operation and organization), there are other prerequisite competencies to effective consultation practice.

PREREQUISITE COMPETENCIES

A *sense of self-awareness* with respect to feelings, beliefs, thoughts, impact on others, and a personal clarity regarding one's values and theoretical bases is helpful to consultants (O'Neill & Trickett, 1982). Because a large aspect of the consultation process involves interpersonal interaction and influence, consultants must be aware of their own interpersonal styles, biases, and values, and of how these can affect their own perceptions of problems, as well as influence consultees and the problem-solving process.

Similarly, *good interpersonal and communication skills* are critical because consultation relies heavily on the interpersonal influence process to accomplish its goals. Consultants need, for instance, to be active listeners and to utilize effective questioning techniques to extract necessary information from consultees and to develop clear conceptualizations of problems. Further, the establishment of warm, caring, and understanding relationships is as important in consultation as it is in counseling.

Knowledge of intervention technology, both individual-focused and organizationally focused, likewise is an essential competency, but one that has been largely neglected in the consultation literature (Heron & Harris, 2001, is a notable exception). Gutkin (1981) found that more than two-thirds of the reasons consultees sought assistance were related to their lack of knowledge and skill in resolving problems, although an empowerment framework for categorizing these reasons was not employed in this study. The implication is that process skills are important but not sufficient for resolving most issues in consultation. Problem-solving and applied behavior analysis skills are also critical. Further, the goal of consultation is to promote application of effective interventions by consultees, which suggests that consultants must be knowledgeable about empirically validated techniques (e.g., Kratochwill & Stoiber, 2000; Stoiber & Kratochwill, 2000; Task Force on Promotion and Dissemination of Psychological Procedures, 1995). Unless consultants are successful in this endeavor, schools will be less likely to use this technology to benefit students, no matter how potentially effective it is (Wolfe, 1978).

An *understanding and knowledge of schools as organizations and of organizational functioning* is necessary for an ecological, systems perspective. Too often, school psychology training and daily practice tend to focus on the assessment and remediation of individual student-related problems, and consequently do not attend to more global and macro-level variables that exert significant influence. Thus, "consultants need an understanding of the workplace [school] not only as a technological system but also as a complex social organization" (Gallessich, 1982, p. 5). School norms, values, philosophy, and organizational climate can greatly facilitate or impede the consultative process.

An *awareness and sensitivity to cultural, racial, ethnic, socioeconomic, and gender issues* are important social dynamics in the consultation process. These various sociocultural factors, although not often discussed within the context of consultation, can exert considerable influence on the communication process, development of trust, reciprocal and mutual understanding, and overall relationship development (Ramirez, Lepage, Kratochwill, & Duffy, 1998). In addition, they have been found to affect help-seeking patterns and utilization of services, attitudes toward self-disclosure, duration of treatment, and outcome of treatment (Gibbs, 1985; Lorion, 1978). Further, these issues can affect the power-authority dimension of consultation, especially when one participant is a member of a minority and the other of a majority group. Finally, these same dimensions can influence the expectations of consultants and consultees, and thus the types of interventions that are developed.

ASSUMPTIONS

In addition to the above competencies, several assumptions underlie consultation. First is a belief that most parents, teachers, and other school personnel usually *want to be involved in the problem-solving process*. We recognize that there is a subset of people who (a) wish to be told what to do rather than jointly develop interventions; (b) do not want to deal personally with the presenting problem for some reason, but rather desire and expect someone else to do it (e.g., want a child placed in a special program); (c) fail or refuse to recognize the existence of a problem situation and thus do not seek consultative assistance; (d) do not have the skills or interests necessary to implement various interventions; or (e) face organizational restraints that prohibit or minimize their participation in the process. In addition to these groups, there are potential consultees who expect the consultant to "tell them what to do" based on their experiences with helping professionals, when in fact they actually would like to be involved in the problem-solving process (Zins & Curtis, 1981). This group can best be dealt with through an educative process about consultation.

A second assumption is that *prevention and early intervention are advantageous* for most children. There is a growing, convincing body of literature that supports this assumption (e.g., Minke & Bear, 2000), although there remains a clear need for additional research regarding the preventive aspects of consultation. Third, as noted earlier, *a vast intervention technology exists* that can be applied to address the problems experienced by children and schools. The challenge is how to apply it within the constraints of the school setting.

Finally, all school psychological services to children and schools are *best provided through a consultative framework*. That is, virtually all requests for assistance in dealing with a problem should begin with consultation. Thus, services such as psychoeducational assessment and counseling are viewed as components of problem clarification or as interventions developed through consultation to solve the problem.

BEST PRACTICES

Consultative Problem-Solving Process

Problem solving is the essence of consultation. It includes a number of steps from relationship development to initial designation of the problem; development and implementation of an intervention plan; evaluation of goal attainment and plan effectiveness; and concludes with planning for generalization, maintenance, and follow-up (Bergan & Kratochwill, 1990). As described in the following pages, it is necessary to engage in multiple levels of problem analysis and intervention development during this process. Because consultation is an indirect service, it requires that changes be brought about on more than just the individual student level. Child-related difficulties often result, at least in part, from ineffective instructional or classroom management strategies or from other external to-the-child causes. Consequently, it is essential to remain aware of the link between changes in the environment or in consultees' behavior, and changes in the target student(s) (Hawryluk & Smallwood, 1986). Furthermore, although consultative interventions may involve multiple consultants and consultees and can occur at several organizational levels, the primary focus of our discussion is on individual students, consultants, and consultees rather than on broader levels of change.

An ecological/systems perspective provides participants with a framework for developing a broad conceptualization of problems and for examining the wide range of factors that could be contributing to a problem situation. As stated above, problem analysis includes a thorough assessment of consultee variables as well as other factors affecting student behavior. For example, inaccurate perceptions or expectations of a child's behavior by the consultee may contribute to a problem. Research in the area of attributions has found that teachers generally perceive problems to be caused by factors internal to the child or because of home variables (Medway, 1979). Although child or home issues may be part of the problem, they should not automatically be considered the only cause. Student-related problems usually result from complex and reciprocal interactions among the child's behavior and the environmental and/or instructional conditions that regularly exist in a particular classroom, school, and community. Therefore, as participants in the consultation process define and analyze problems, information should be gathered not only about the child and the immediate contingencies affecting his or her behavior, but also about the ecology of the classroom, school, and community, or the home environment itself. Obtaining a broader perspective of the problem and reconceptualizing important variables as within teachers' or parents' power to change, will have impact on their causal attributions and expectations for problem resolution, as well as on the range of intervention strategies considered.

ESTABLISHING A COOPERATIVE PARTNERSHIP

The overall consultation process begins with establishment of a cooperative partnership (Table 1). Relationship building is a critical element of the process, beginning with the consultant's initial entry into the school and continuing throughout the proceedings. When consultants and consultees meet for the first time, each participant attempts to become better acquainted with the other, they strive to create an atmosphere of mutual respect and trust, and together they develop a "working contract"; that is, a basic understanding of what will occur during consultation. The contract minimally specifies the roles and responsibilities of each party, expected activities, and anticipated timeline for the consultation.

Two points in the process require clarification. First, although the steps in problem solving are presented sequentially, they usually overlap and thus may not occur in this exact order. Also, because of space limitations, examples in this section primarily refer to one-to-one consultation occurring between a school psychologist and a teacher, but clearly are applicable to a wide range of situations (e.g., group and organizational consultation, family-school partnerships, system change efforts).

CLARIFYING THE PROBLEM

The second step is to define the presenting problem(s) in clear, concise, complete, and measurable terms. Because there is a level of interdependence that exists between the problem definition and the potential interventions (Gutkin & Curtis, 1999), the following objectives need to be considered during this phase. First, consultants should help consultees describe concerns, goals, and expectations in a behaviorally specific manner to the extent possible. Consultees often do not have clear conceptualizations of problems when they request assistance, and they consequently present information in vague, global terms. Through skillful questioning, paraphrasing, and summarizing, an array of variables associated with the problem can be brought to their attention and then defined in measurable terms (see guidelines in Table 2). The collection of baseline data is an essential component of this step. Often, it is expedient to divide a complex problem into its component parts, thereby helping to ensure that neither participant is overwhelmed, and that both can work toward a useful problem analysis.

Often more than one problem may be designated, in which case they must be prioritized according to the perceived level of concern. With respect to an individual student, target behaviors can be ranked based on: (a) behaviors considered to be physically dangerous to self or others, (b) positive low frequency behaviors in need of strengthening, (c) behaviors that can be naturally reinforced in the environment, (d) behaviors viewed as essential for development, and (e) behaviors that maximize functioning in a variety of settings. Further, all target behaviors selected should be consistent with developmental norms (see Kratochwill, 1985, for an excellent summary of issues in target selection).

Target behaviors must be defined in concise measurable terms. Consultants and consultees should agree about the definition, and it should be worded in such a way that both parties (and others) can reliably record its occurrence. For instance, if lack of motivation is identified as a problem, it could be operationally defined in terms of "number of spelling assignments completed on time each day in school, and percent of correct responses." This definition is specific, easily measurable, and understandable to all.

Although target behaviors are often some aspect of the child's behavior or performance, this does not imply that the child should be the only focus of the intervention. Consultees' perceptions, instructional variables, or aspects of the classroom or school ecology are often what is changed. For example, use of teacher praise and feedback, or opportunities for students to respond in the classroom may be altered. However, the effects of these changes ultimately are still measured in terms of student outcomes.

Questions may be raised during the problem identification (i.e., initial) interview that need to be answered by additional methods of assessment. Direct classroom observations, functional assessment, utilization of curriculum-based probes, analysis of student permanent products, or assessment of organizational communication, structure, or climate are among the procedures that may be considered to help answer these questions (Zins, Curtis, Graden, & Ponti, 1988).

PROBLEM ANALYSIS

Once the target behaviors are identified, a comprehensive functional assessment of the interaction that exists between the child's behavior and the environment is conducted (e.g., Witt, Daly, & Noell, 2000). The baseline data and results of the assessment procedures are key components of this step because they provide a first-hand look at the complex interactions that occur between students, consultees, and their daily environments. Temporal and situational antecedents that appear to contribute to the problematic behavior should be identified. In addition, situations during which the behavior of concern does not occur can be noted, and consequences operating to maintain the behavior can be recorded. When identifying consequences, consultants should obtain information on (a) whether appropriate positive reinforcement is given, (b) forms of inappropriate reinforcement or attention gained by exhibiting the behavior, (c) the schedules of reinforcement in operation, and (d) reinforcement histories.

Table 2. Guidelines for behaviorally oriented problem identification interview

1. Definition of the problem

- Specify vague general statements regarding the consultee's concerns. ("You say that Rob is aggressive toward other children. Can you give me some specific examples of his aggressive behavior?")
- Develop an operational definition of the problem. Define the problem in measurable terms. Make it specific enough that others will be able to recognize it when they see it.
- Collect information about the frequency and duration of the problem. ("How many times per day does Mary shout out in class? How long does each episode of behavior last and for what length of time has the problem been occurring?"). Baseline data should be collected.
- Assess intensity or severity of behavior. ("Describe what types of things Brian does when he throws a temper tantrum.")
- If more than one problem is presented, then prioritize and select one target behavior on which to work initially.

2. Identify antecedent determinants of the problem behavior

- Identify temporal and situational antecedents. ("Are there times of the day when the behavior occurs most frequently? In which settings does the behavior occur?")
- Identify the behavior of others that may trigger or maintain the problem behavior. ("It seems that whenever you are paying attention to other children John's disruptive behavior intensifies.")
- Identify and analyze conditions that alleviate the problem. ("Does Sue seem to work better when you have structured her independent seatwork time through the use of goal setting and a timer?")

3. Identify consequences that may maintain the behavior

- Explore positive consequences that currently are provided or could be instituted to improve behavior or performance. ("What do you do when Joe completes all of his homework?" "What things does Cindy really like to do?")
- Explore forms of inappropriate reinforcement or attention occurring.

4. Assess other relevant environmental variables

- Identify significant others in the child's environment and assess their attitudes, attributions, and expectations regarding the problem and the child in general.
- Assess the discrepancy between the child's behavior and expected behavior. ("Howard is out of his seat on an average of 15 times per half-hour period. How many times would it be acceptable for him to be out of his seat within this time period within your classroom?")
- Assess instructional variables and classroom or home routines.

5. Identify all available resources

- Identify the strengths of the child. ("What types of things does Lisa do well?" "In what subject areas is William succeeding?")
- Identify materials and human resources available for intervention (e.g., peer tutors, parent volunteers, special instructional materials).

Note. Adapted from Peterson (1968).

Relevant environmental and instructional variables that operate regularly within a child's classroom or the larger organizational context must also be identified and analyzed. For instance, a consultant could determine whether the teacher had developed a set of rules to establish consequences for particular behaviors, how consistently the rules are enforced, amount of reinforcement available to the child from sources other than the teacher, peer reactions to the target behavior, opportunities the student is given to respond (both oral and written), method and delay in providing instructional and behavioral feedback, and appropriateness of curriculum (Witt & Martens, 1988). For academic problems, a task analysis of student skills in a particular subject may be necessary through methods such as Curriculum-Based Assessment/Measurement, examination of permanent products, and think-aloud techniques. Teacher and/or parent perceptions and expectations also should be explored to help them understand the array of factors that could be influencing the child's behavior or performance. As a result, they may be more open to making needed changes in behavior management or in instructional strategies. Finally, other variables such as peer interactions, school policies, and community norms should be examined.

Instructional practices of teachers and daily classroom, school, and home routines also need to be clarified to obtain a broad ecological perspective. Many problems that appear to be individually based on closer examination may require systems-level intervention. Traditionally, however, not much attention has been given to the environments of children and the adults who function in the children's environments. Nevertheless, it is the adults, not the child, who primarily control the environment in which the child lives (Saxe, Cross, & Silverman, 1988). In addition, teachers may require help in operationalizing what is acceptable behavior or performance in the classroom so that reasonable goals for the child can be developed.

Finally, all resources that potentially could be utilized in the development and implementation of interventions must be identified. These include student strengths, aspects of the system that are helping the child be successful in other situations, and material and human resources (teacher, time, parents, peer and volunteer tutors, community support systems) available for intervention.

BRAINSTORMING AND EXPLORING INTERVENTION OPTIONS

Once the problem is clearly defined and analyzed, the organizational level of intervention must be determined. For example, a program could be developed for an individual student, or the focus could be on helping a teacher change instructional practices or behavior management strategies for an entire class. Likewise, to address the problem, the district's reading curriculum might be altered, its policy on possession of weapons could be modified, or community norms regarding teenage alcohol use targeted. When participants agree regarding the level of intervention, they then generate as many treatment options as possible. The cardinal rule of this phase is to avoid evaluating ideas until the brainstorming process is completed. There often is more than one way to resolve a problem, and by generating a number of possible solutions, the probability is maximized of identifying an intervention that is both effective and acceptable to the consultee.

Interventions usually consist of some form of environmental manipulation because (a) there is substantial research specifying what types of environments lead to effective teaching, parenting, and behavioral change; (b) all consultees routinely manipulate meaningful school and home environmental variables; and (c) most consultees do not have the skills to engage in non-environmental manipulations such as counseling. Examples of variables that can be considered for manipulation include reinforcement and punishment contingencies, curriculum content, instructional techniques, teacher behavior, peer and sibling behavior, physical arrangement of the home and classroom, and the school administration (Gutkin & Curtis, 1999).

SELECTING AN INTERVENTION

After a number of intervention ideas have been generated, each should be evaluated to determine potential benefits and risks, unintended side effects, and feasibility of implementation. There generally are no "packaged" solutions to problems. Because a taxonomy of interventions related to a corresponding taxonomy of diagnoses does not exist (Gutkin & Curtis, 1999), treatments selected during consultation are simply high probability hypotheses. After a careful analysis of the problem is conducted, hypotheses are formulated regarding what is eliciting and maintaining the behavior or situation, and intervention strategies are developed from this information. Although consultants guide the interpersonal interactions, oversee the problem-solving process, and maintain primary responsibility for providing adequate information about the various intervention procedures identified, all participants contribute to the process and the ultimate selection of strategies rests with consultees. The following guidelines are useful in generating and selecting interventions.

1. Implement positive intervention approaches before resorting to behavior suppression or reduction techniques in all but extreme cases.

2. Choose the least complex and intrusive intervention possible. To the extent possible and appropriate, the focus should be on helping consultees modify instructional variables or general behavior

management strategies. Alterations in existing techniques usually are less intrusive or aversive to teachers and parents than is learning a new procedure.

3. When a new skill must be developed by consultees, design it to fit into present structures and routines as much as possible.

4. Develop a pool of resources such as peer and volunteer tutors or community resources that can be utilized when changes in the classroom are not possible or not sufficient to resolve presenting problems.

5. Provide support and reinforcement to consultees for implementing the intervention. Because a behavior change on consultees' part often is required, consultant support will encourage their continued enthusiasm and adherence in treatment implementation.

6. Promote interventions that require less time, are not ecologically intrusive, and are perceived by consultees to be effective. These types of interventions tend to be more acceptable to consultees (Elliott, 1988).

7. Finally, focus intervention efforts on promoting change at the highest organizational level possible.

CLARIFYING IMPLEMENTATION PROCEDURES AND RESPONSIBILITIES

Just as the nature of consultation was clarified initially, the pragmatic aspects of implementation should be clarified once the intervention(s) is selected. First, the roles and responsibilities of all participants in delivering the intervention must be delineated and agreed upon. The specific techniques should be outlined in a step-by-step fashion and potential reinforcers identified (often through a formal reinforcer assessment). The time(s) of the day and the settings or subject areas in which the intervention will be implemented must be decided. At this time, consideration should be given to programming for generalization. Specific suggestions for maximizing the probability that behavior change will generalize across time, persons, and settings are provided later in the chapter. All aspects of the plan should be put in writing in at least outline form (some consultants use a written protocol format) so each person involved has a clear idea of his or her responsibilities. This written plan also serves as a record for accountability purposes.

IMPLEMENTING THE STRATEGY

Once the intervention plan is developed, consultants should keep in contact with consultees to aid in implementation, provide technical assistance, and reinforce consultees' efforts. Consultees often have questions about the details of the plan, unanticipated behaviors may arise, there may be unintended reactions from other children, or there may be changes in the school environment. As a result, even the best-laid plans may need to be altered. Further, consultants can enhance consultees' motivation by involving the consultees in goal setting, establishing a trusting and warm relationship, and demonstrating personal competence (Brown & Schulte, 1987). In addition, if the intervention requires consultees to learn a new skill or to make substantial changes in current practices, it often is helpful for consultants to model the procedure, observe consultees implementing it, and provide constructive, supportive feedback (e.g., Noell, Witt, Gilbertson, Ranier, & Freeland, 1997). All of these elements—ongoing contact, adequate training, and support—are crucial for increasing and ensuring treatment integrity and success.

Consultee resistance to the planned intervention still may occur, although it can be minimized through establishment of a cooperative, supportive partnership. However, consultants must remember that the consultation process may (a) require considerable consultee effort and time, (b) focus on consultee failure, (c) involve differing perspectives of desirable outcomes, and (d) not result in immediate problem resolution (Piersel & Gutkin, 1983). Because each of these possibilities is non-reinforcing for consultees at least on a short-term basis, it is understandable that resistance is often encountered. By being aware of the potentially negative aspects of consultation, consultants may be better prepared to deal with any resistance. Further, there are many legitimate issues that consultees face that may prevent them from being able to carry out interventions as planned, and it is incumbent upon consultants to become aware of those issues to the extent possible.

EVALUATING INTERVENTION EFFECTIVENESS AND FOLLOW-UP

There are several interrelated aspects in this stage of the problem-solving process, including determination of intervention effectiveness, generalization, fading, and follow-up.

Evaluation of Intervention Effectiveness. Once the intervention plan is implemented, it should be systematically and regularly monitored to ensure treatment integrity and to identify any unintended side effects. Of course, the evaluation plan should be agreed upon before intervention implementation begins. Generally, the same data collection procedures used to obtain baseline information can be applied again as a means of evaluation. These methods should be as simple and time efficient as possible so that a teacher, student, parent, or peer can easily use the system. Single-subject methodologies such as single phase, reversal, or multiple baseline designs are often used to evaluate intervention effectiveness. These evaluation procedures may suggest that (a) the intervention resulted in attainment of desired goals, thereby indicating that follow-up monitoring and/or generalization and fading procedures are needed, or (b) the intended outcomes were not reached entirely, suggesting the need to recycle through earlier problem-solving steps.

Generalization, Fading, And Follow-Up. Evaluation data will indicate the degree to which the intervention is producing the desired outcome. Once an effective and reliable procedure has been identified, the intervention can be extended to other settings or systematically faded.

Although there are many well-developed, validated techniques for bringing about behavior change, we know substantially less about how to maintain these gains. A number of suggestions, however, have been offered in the literature on how to program *generalization* as interventions are developed and as they proceed to be implemented (Meichenbaum & Turk, 1987). Selected reinforcers, for instance, should be naturally occurring events when possible, and techniques should be implemented in a manner that lends them to fading or to greater transfer of control to the student (i.e., self-management approaches). Students and parents should take an active role in intervention development when possible and appropriate, and efforts should be made to help them understand the usefulness and relevance of the intervention to their lives. Training should take place in a number of settings using multiple tasks and trainers. Finally, opportunities to confront and deal positively with failure or mistakes also should be built into the intervention procedures.

Interventions that include specific prompts or reinforcement contingencies need to be *faded* systematically once the child is performing at desired levels. It is important to withdraw prompts or reinforcement in small steps rather than all at once to ensure maintenance of treatment gains. Fading can consist of increasing the amount of time before a child can earn a reinforcer, increasing task demands to earn a reinforcer, or decreasing the number of prompts given to children to elicit performance. If at any step in the fading process the student's behavior begins to deteriorate, reinforcement or prompting should revert to the previous level. Once the child's behavior stabilizes again for a reasonable period of time, fading can be continued.

The importance of *follow-up* by consultants during this stage is critical, although often neglected. Follow-up helps ensure that intervention procedures are being implemented correctly, and it can address the issue of unintended outcomes. When interventions provide ineffective or unreliable outcomes, consultants should observe the intervention in operation and conduct a functional assessment of the current situation to determine what conditions might be contributing to the non-attainment of the desired goals. Oftentimes, modifications in the existing plan suggested through corrective feedback are all that are necessary to increase ease of implementation, improve intervention effectiveness, or counteract unanticipated student responses. If the alterations do not result in better outcomes, then a new strategy should be sought, once again through the problem-solving process.

INFLUENCES ON THE CONSULTATION PROCESS

Central to the success of the consultation process are the issues of treatment acceptability, adherence, and integrity. Consideration of these issues, along with establishment of a cooperative partnership, can be major factors in intervention success, as well as in decreasing or avoiding resistance. *Acceptability* refers to judgments or beliefs of consultees and students about whether a treatment is "appropriate, fair, and reasonable for the problem or client" (Kazdin, 1981, p. 493). If participants like the intervention (i.e., find it acceptable), then they may be more likely to use it or to carry it out correctly (Wolfe, 1978), although it has been shown recently that pretreatment ratings of acceptability correlate only .30 with actual plan implementation (Martens, Kelly, & Diskin, 1996). *Adherence* involves the willingness of (a) consultees to carry out interventions to their completion and (b) students to engage in certain behavior changes indicated in the intervention plan (Meichenbaum & Turk, 1987). *Treatment integrity*, as mentioned earlier, refers to the extent to which consultees implement the intervention plan as intended (Gresham, 1989). Elliott (1988) proposed that the elements of acceptability, adherence, and integrity are reciprocally dependent; that is, they influence and are influenced by one another. Adherence and integrity are the two elements that link intervention use with effectiveness.

Not only is it important for interventions to be carried out, but the quality of the process by which they are delivered is also of concern. Thus, in addition to treatment integrity, implementation quality includes several additional key elements: (a) the treatment dosage or the frequency and duration of the intervention received by the target, (b) qualitative aspect of how the intervention was delivered (e.g., affective conditions under which the intervention was provided), and (c) participant (e.g., child) responsiveness to the intervention (Durlak, 1998). There may be significant differences between how the treatment was planned and how it actually was implemented, and these discrepancies must be monitored to increase effectiveness.

Because consultation is an indirect service and consultees almost always implement interventions, there are two levels of acceptability and adherence related to the process. The first involves the extent to which the consultees are actively involved in carrying out a mutually acceptable course of action to produce a desired behavior change in children. The second level involves the extent to which children are involved in the process and cooperate with the treatment plan implemented by the consultee (Meichenbaum & Turk, 1987). Further, there are certain factors related to treatment integrity, including the complexity of the intervention, time required to implement the plan, materials or resources needed, number of treatment agents involved, perceived and actual effectiveness of the intervention, and consultees' motivation, that affect implementation (Gresham, 1989).

When interventions are not followed or result in failure, consultants most often cite consultee variables such as motivation or skill as the cause (Martin & Curtis, 1981). Although consultee motivation may play a role in the success or failure of consultation outcome in some cases, it is not the predominant variable nor is it generally within the consultant's sphere of control. As indicated in Table 3, there are numerous factors that influence both adherence and treatment integrity. Although correlational in nature, these factors can provide useful guidelines for consultants interested in enhancing both adherence and treatment integrity on both consultee and student levels. It is evident from the literature, for instance, that relationship variables are of crucial importance. Adherence can be improved and resistance decreased through establishment of a supportive, cooperative partnership characterized by open communication. As mentioned previously, efforts should be made early in the process to clarify consultee beliefs and expectations about the consultation process and about intervention options and outcomes. In addition, discrepancies between consultants' and consultees' causal attributions for problems need to be resolved as they clarify the problem (Zins, 1985). And, systems-oriented consultants must also examine how their interactions, skills, attitudes, and beliefs may have contributed to the lack of success.

Other factors that affect treatment adherence include characteristics of the intervention procedures chosen and the extent to which clients (children) are involved in the process. A related issue is that of consultants' adherence (Meichenbaum & Turk, 1987). Consultants need to be aware of their own beliefs regarding their ability to help improve consultees' and clients' adherence, make efforts to monitor their own interactions with consultees, and develop the type of consultative relationship that maximizes the probability of adherence. Finally, because consultation sometimes results in short-term negative outcomes for consultees as noted earlier, the importance of providing support and encouragement is underscored.

ORGANIZATIONAL AND SYSTEM-WIDE CONSULTATION

School consultation is not limited to one-to-one interactions between a consultant and a consultee, or to

Table 3. Examples of factors affecting treatment adherence and integrity

Client (student) variables

- Belief that a problem exists
- Belief that the problem could have a negative impact on the student
- Belief that participating in the intervention will help the student
- Perceptions regarding not having a choice about being treated

Consultee variables

- Beliefs about potential efficacy of the intervention
- Understanding of the consultative process
- Satisfaction with the relationship with the consultant
- Misconceptions held
- Cultural beliefs and values
- Opportunities available to exhibit skills
- Beliefs about ability to carry out the intervention
- Personal motivation to resolve the problem
- Skills in describing problem situations and carrying out interventions
- Perceptions of consultant's expertise and competence

Consultant variables

- Theoretical orientation and values
- Skills in problem solving
- Technical competence in intervention development and evaluation
- Understanding of organizational functioning and change
- Motivation and enthusiasm
- Self-awareness and understanding

Relationship variables

- Interpersonal and communication factors
- Discrepancies between consultant and consultee attributions
- Participant sensitivity to cultural, racial, ethnic, and gender issues
- Extent of cooperation or mutual participation in process
- Continuity of involvement
- Extent of support and follow-up provided

Treatment variables

- Complexity of the intervention
- Time and resources required to carry out the interventions
- Intrusiveness of intervention relative to established regularities
- Duration of intervention
- Number of behavior changes that are made at once
- Number of treatment agents involved
- How soon behavior change is observed

Organizational variables

- Openness of social/organizational climate
- Opportunities and support provided for change
- Length of time until assistance is provided
- Perception of organizational support
- Time and resource availability
- Principal's leadership behavior

Note. Adapted from Gresham (1989), Gutkin (1986), Meichenbaum & Turk (1987).

behavioral change in individual students (although those are the foci of this chapter). Consultation may also involve simultaneous problem solving with parents and teachers, as in conjoint behavioral consultation (Sheridan, Kratochwill, & Bergan, 1996). At other times consultation is expanded to include groups of consultees, an entire school, or even a school district. Consultants increasingly are focusing on larger organizational issues to maximize and expand their influence, and to deal with problems that truly are systemic in origin. The same problem-solving procedures described earlier are followed in these instances, but, of course, there is a different focus, other types of interventions are developed, and there may be more people involved. However, behavior analytic and social learning procedures continue to be relevant. Examples of organizational consultation include involvement in the evaluation of a district-wide program for social and emotional learning, establishment of a smoking prevention program in a middle school, development of a program for senior high students to encourage car safety belt use and avoidance of alcohol, implementation of a tutoring program utilizing the services of volunteer senior citizens, and initiation of a health promotion program for school employees.

Over the last decade increasing numbers of schools have implemented consultation on a system-wide basis through intervention assistance (sometimes called prereferral) programs (Zins et al., 1988). These programs are a means to provide assistance to students in mainstream settings before a referral is made for special education assessment. Unlike most forms of assistance in schools, these services are available to all students and do not require the assignment of potentially stigmatizing labels for service. As a result, more students can be served, services are provided on a timelier basis, communication among involved staff can be enhanced, and a wide variety of interventions can be developed (Zins et al., 1988).

There are many variations on how intervention assistance programs have been organized and delivered (see Zins, Heron, & Goddard, 1999). However, the more comprehensive programs generally feature a number of levels of problem-solving help: collegial support among teachers; consultation with specialists such as school psychologists, special educators, and/or speech and language therapists; and group consultation with intervention assistance teams composed of individuals such as a school psychologist, special educator, general educator, administrator, other special services personnel (e.g., nurse, counselor), and parents (and children). Although additional investigation of this process is needed, research to date suggests that these programs are "a promising method for delivering preventively-oriented school psychological and educational services" (Zins et al., 1999, p. 810).

SUMMARY

As consultation continues to become a major aspect of many school psychologists' jobs, it is critical for them to keep abreast of the latest theoretical and empirical knowledge of this emerging field. The knowledge base of effective consultative interactions, systems-level influences, and evaluation techniques is expanding quickly, and this chapter represents an integrative summary of many of the most important of these recent developments. Included was a review of the essential aspects of consultation practice, including its emphasis on a cooperative partnership, a preventive and empowering ideology, consideration of systems issues and of the reciprocal and interdependent nature of the interactions, implementation issues, and a review of the most important dimensions of the problem-solving process. Our intent was to succinctly review the essential information needed to effectively engage in consultation. Ultimately, it is hoped that improvements in consultation practice will result in school psychologists being identified with consultation-based services that focus on intervention design rather than with traditional IQ testing directed toward special education identification and placement, so that successful outcomes for children occur with increasing frequency.

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A very useful source for those who seek to develop the essential knowledge and skills of consulting. This text examines various models of practice and presents in detail the stages and processes of consultation. The chapters concerned with consulting with teachers and parents seem especially germane to the practice of school psychology.

Caplan, G., & Caplan, R. B. (1999). *Mental health consultation and collaboration*. Prospect Heights, IL: Waveland Press. (Reprinted from Caplan, G., & Caplan, R. B. (1993). *Mental health consultation and collaboration*. San Francisco: Jossey-Bass.)

This book is a revision of Gerald Caplan's (1970) seminal work, *The Theory and Practice of Mental Health Consultation*, one of the most frequently cited books within school psychology. Besides updating the mental health consultation model, the Caplans describe mental health collaboration and argue that internal consultants such as school psychologists should use collaboration rather than consultation.

Erchul, W. P., & Martens, B. K. (1997). *School consultation: Conceptual and empirical bases of practice*. New York: Plenum.

The authors review and integrate the most conceptually useful and empirically supported principles from the consultation literature. They then propose that the effective practice of school consultation involves the accomplishment of three interrelated tasks: problem solving, social influence, and professional support and development.

Gutkin, T. B., & Curtis, M. J. (1999). School-based consultation theory and practice: The art and science of indirect service delivery. In C. R. Reynolds & T. B. Gutkin (Eds.), *The handbook of school psychology* (3rd ed., pp. 598–637). New York: John Wiley.

This well-referenced chapter provides a comprehensive overview of key issues associated with consultation within the field of school psychology. The authors' coverage of the rationale for consultation, major approaches to school consultation, and critical presentation of contemporary and future issues is particularly noteworthy.

Zins, J. E., Kratochwill, T. R., & Elliott, S. N. (Eds.). (1993). *Handbook of consultation services for children: Applications in educational and clinical settings*. San Francisco: Jossey-Bass.

Following the editors' overview of the history and current status of consultation, chapter authors review conceptual foundations, models, processes, evaluation considerations, practice issues, and training approaches pertaining to the field. The book is the most complete source of information for the school-based practitioner or researcher, and also contains extensive references that readers may consult for additional information.

42 Best Practices in Operating Pre-Referral Intervention Teams

Joseph F. Kovaleski
Cornwall-Lebanon (PA) School District

OVERVIEW

For over a quarter century, the role of the school psychologist as consultant to teachers and administrators has been emphasized as a professional practice (Ysseldyke, Reynolds, & Weinberg, 1985; Ysseldyke, Dawson, Lehr, Reschly, Reynolds, & Telzrow, 1997) and as a subject of research literature (Zins & Erchul, 1995). At this point, many school psychologists are actively involved in teacher consultation.

Originally practiced in a one-to-one (dyadic) arrangement, many school psychologists now find themselves performing school consultation in a team format. This trend began in the 1980s when consultation teams were proposed as a method to increase teacher effectiveness and provide support for students who displayed classroom difficulties (Graden, Casey, & Christenson, 1985). Fueled by an alarming increase in the numbers of students identified for special education, particularly in the learning disabilities category, the popularity of school-based teams increased as educators sought methods to curtail the perceived over-identification of students with disabilities. Many school systems began to develop consultation teams under such titles as intervention assistance teams and child study teams. By the late 1980s, many states required team consultation as a pre-condition for referral for a full and individual evaluation for eligibility for special education. Carter and Sugai (1989) reported in a national survey that 23 states required and 11 others recommended pre-referral interventions, which were most commonly provided in team formats. Simultaneously, a substantial literature developed regarding pre-referral interventions and teams in particular. (For comprehensive reviews, see Nelson, Smith, Taylor, Dodd, & Reavis, 1991; Ross, 1995; Safran & Safran, 1996; Schrag & Henderson, 1996; and Sindelar, Griffin, Smith, & Watanabe, 1992.)

Fuchs, Fuchs, and Bahr (1990) defined pre-referral intervention as the "... teacher's modification of instruction or classroom management to better accommodate a difficult-to-teach pupil without disabilities" (p. 128). Pre-referral teams typically consist of groups of teachers and/or specialists who gather to solve classroom problems for students who are identified by classroom teachers. Types of membership can be differentiated according to the extent to which the team consists of classroom teachers only, or is enhanced by information from specialists (e.g., school psychologists, special education teachers, guidance counselors). The teacher assistance team (TAT) model (Chalfant, Pysh, & Moultrie, 1979) featured teachers assisting other teachers in a team format, which allowed for the brainstorming of strategies calculated to address the problem. Other models utilized specialists who were specially trained or who had particular types of expertise as adjuncts to the team of teachers (Batsche & Knoff, 1995b; Fuchs et al. 1990; Graden et al., 1985). Rosenfield and Gravois (1996) included teachers and specialists in an instructional consultation team format that served as a vehicle for incorporating precisely designed instructional strategies into a teacher-consultation process. During the 1990s several states, including Iowa (Tilly, Clark, Atkinson, & Flugum, 1992), Pennsylvania (Kovaleski, Tucker, & Stevens, 1996), Kansas, Vermont, and Ohio, mandated pre-referral teams that featured specialists and teachers using a problem-solving process.

It is acknowledged that many argue that the team assistance process should be disconnected from special education. Using the term "pre-referral" is said to imply that these procedures serve only as perfunctory last steps prior to an inevitable referral for an evaluation for special education eligibility. It is further argued that the focus of these team-based activities should be on the improvement of general education. In spite of these legitimate conceptual concerns, the term, "pre-referral teams," will be used in this chapter for the following reasons. First, there is no consensus in the field as to what these teams should be called (e.g., intervention assistance teams, instructional support teams, child study teams). All of the extant terms have developed different connotations, and no one term leads directly to an understanding of what can be considered as best practice at this time.

A second reason to maintain a connection with special education is that a student's response to a team-supported intervention should be assessed prior to consideration for special education. Kovaleski and Prasse (1999) argued that the requirement of the Individuals with Disabilities Education Act (1998) regarding the determination as to whether a student's problems are due to a lack of instruction can be most effectively operationalized through an assessment of the student's response to intervention. Given the historic concern that norm-referenced tests alone can not reliably discriminate a disability from academic underachievement (Ysseldyke, Algozzine, Shinn, & McGue, 1982), it is important that the screening process include this assessment prior to referral for further evaluation. This assessment is most effectively conducted by a team of school personnel that includes the student's teacher.

In using the term pre-referral team it is not implied that schools should wait until students are on the cusp of a referral to special education to utilize a team-based, teacher support process. A major benefit of these teams has been their emphasis on early intervention. Hartman and Fay (1996) reported that 85% of students served by instructional support teams did not need further evaluation for special education. However, with proper documentation of results, the data collected during the intervention can later be used as part of a full and individual evaluation if necessary.

The purpose of this chapter is to articulate those best practices that have been identified to increase the effectiveness of pre-referral teams. These practices are based on three sources: (a) the conceptual literature on teacher consultation, (b) results of studies conducted on pre-referral team effectiveness, and (c) reports from states that have mandated pre-referral teams. After a description of the basic considerations that school psychologists and other specialists need to bring to the pre-referral team structure, the identified best practices will be divided into systemic factors and process factors. Systemic factors are not directly related to consultant functioning or skills, but are important from an organizational perspective for the process to be effective. Process factors are directly related to the functioning of school psychologists and other specialists who serve on pre-referral teams.

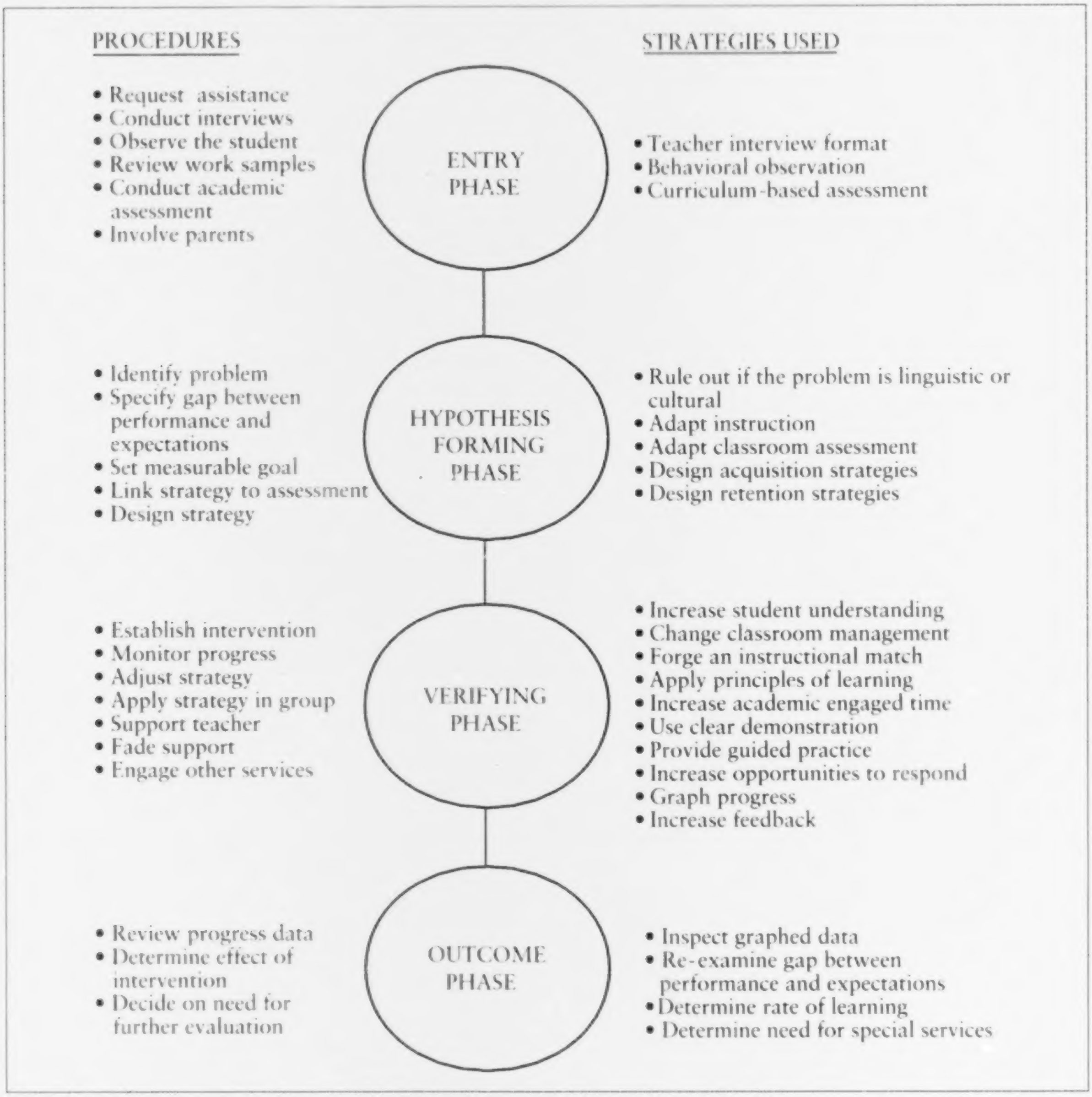
BASIC CONSIDERATIONS

In this chapter it will be assumed that school psychologists have training and experience in a number of professional skills that are critical to effective functioning in a pre-referral team format. While these skills will be summarized briefly in this section, the reader is referred to the indicated primary sources for detailed information.

The first set of competencies needed by school psychologists who participate on pre-referral teams are those of dyadic consultation, particularly the skills of behavioral consultation (Bergan & Kratochwill, 1990). These competencies include both verbal-interaction skills, such as assisting a teacher to give a more precise definition of the presenting problem, and the collaborative posture considered to be essential to the consultation process (Rosenfield, 1987; Zins & Erchul, 1995).

It is also assumed that school psychologists who participate in pre-referral teams have an understanding of the problem-solving model (Deno, 1995). Figure 1 illustrates a pre-referral team process that incorporates problem solving as its core process. Also essential are skills that are required for effective use of problem solving in a team format. These supporting competencies include curriculum-based

Figure 1. The pre-referral intervention team process


PROCEDURES
STRATEGIES USED
• Request assistance
• Conduct interviews
• Observe the student
• Review work samples
• Conduct academic assessment
• Involve parents
ENTRY PHASE
• Teacher interview format
• Behavioral observation
• Curriculum-based assessment
• Identify problem
• Specify gap between performance and expectations
• Set measurable goal
• Link strategy to assessment
• Design strategy
HYPOTHESIS FORMING PHASE
• Rule out if the problem is linguistic or cultural
• Adapt instruction
• Adapt classroom assessment
• Design acquisition strategies
• Design retention strategies
• Establish intervention
• Monitor progress
• Adjust strategy
• Apply strategy in group
• Support teacher
• Fade support
• Engage other services
VERIFYING PHASE
• Increase student understanding
• Change classroom management
• Forge an instructional match
• Apply principles of learning
• Increase academic engaged time
• Use clear demonstration
• Provide guided practice
• Increase opportunities to respond
• Graph progress
• Increase feedback
• Review progress data
• Determine effect of intervention
• Decide on need for further evaluation
OUTCOME PHASE
• Inspect graphed data
• Re-examine gap between performance and expectations
• Determine rate of learning
• Determine need for special services

Source: Adapted from Kovaleski et al. (1999).

assessment (Gickling & Rosenfield, 1995) and curriculum-based measurement (Shinn, 1995), systematic behavioral observation (Hintze & Shapiro, 1995), linking assessment to intervention (Batsche & Knoff, 1995a), designing high-quality interventions (Tilly & Flugum, 1995), and facilitating treatment integrity (Telzrow, 1995). A further consideration is that the consulting psychologist has an understanding of the literature on effective instruction and the ability to design practical and meaningful interventions based on the research (Lloyd, Forness, & Kavale, 1998).

The premise of this chapter is that all of these components are necessary, but not sufficient, to produce effective team functioning that brings about meaningful outcomes for students in the form of increased academic achievement and/or decreased behavioral difficulties. In the next sections, systemic and team-process features, which are critical to the realization of these outcomes, will be presented.

BEST PRACTICES

System Factors

Many school psychologists have experienced frustration in their attempts to provide consultative services in school systems not receptive to it, frequently being relegated to traditional testing activities. Regardless of the psychologist's individual skills in consultation, there are a number of system factors that are necessary for pre-referral teams to be accepted in schools and to function effectively.

TEAM FORMAT

The most obvious question regarding pre-referral teams is whether a team is actually needed to produce effective classroom interventions. When Chalfant et al. (1979) originally articulated the concept of a team format for school-based consultation, they argued that benefits would accrue as teachers experienced support from their colleagues. Since that time, most systemic pre-referral efforts have included teams, including instructional consultation teams (Rosenfield & Gravois, 1996), instructional support teams (Kovaleski et al., 1996), and various types of school-based intervention teams (Bahr, Whitten, Dieker, Kocarek, & Manson, 1999). In addition to the support function described by Chalfant et al. (1979), providing pre-referral interventions in a team format allows for the development of a sense of mission and team spirit. Facilitating change in general education classrooms can be daunting work, and the team structure allows for members to support each other in the face of unavoidable resistance to change. While teams need to guard against becoming elite groups isolated from the general staff, it appears that teams are preferable to conducting pre-referral consultation on an individual practitioner basis. In Pennsylvania, when instructional support teams were deregulated, 89% of school districts maintained their teams as the way to conduct required pre-referral activities (Bickel, Zigmond, McCall, & McNelis, 1999).

PRINCIPAL LEADERSHIP

The involvement of the school principal in pre-referral teams has been somewhat controversial. The early TAT model included only teachers and excluded the principal from team problem solving on the basis of concerns that principals might inhibit the process because of their responsibility for teacher evaluation. It was imagined that teachers might fear identifying students for assistance because their principal would construe the request as an indication of ineffective instruction or an inability to manage the classroom. In contrast, more recent models (e.g., instructional consultation teams, instruction support teams) have incorporated the principal as a required and vital member of the team. Kruger, Struzziero, Watts, and Vacca (1995) found that administrative support was a critical aspect in the acceptance of teacher assistance teams by teachers.

There are a number of substantive reasons for involving principals in pre-referral teams. Part of the paradigm shift implied in pre-referral intervention is a move away from the search for pathology, that is, the underlying premise of the refer-test-place process, toward a focus on the examination and manipulation of instructional variables. The principal needs to demonstrate tangible support for this shift by attending pre-referral team meetings, articulating an expectation of instructional improvement, and fostering a collaborative atmosphere among the teaching and professional staff. Circumventing the process by appealing to the principal for testing cannot be considered an option. A clear message must be sent that in-class interventions need to be thoroughly implemented before special education eligibility can be considered. Rather than perceiving a request for assistance as a sign of teacher failure, principals need to communicate that the use of the process is a highly professional action.

Another important rationale for the active involvement of the principal in the pre-referral process is the need to coordinate instructional and support services. An important function of pre-referral teams is the coordination of the work of available personnel and services. The principal's role is to assure that these services are deployed in a seamless fashion by helping to allocate needed resources and by assuring that there is curricular and instructional overlap among personnel and processes. The principal needs to model flexibility and creativity in using existing personnel, and work against the often erroneous notion that innovative instructional approaches and personnel arrangements are in violation of existing laws and standards (Prasse & Schrag, 1999). It is also important for the principal to be the lead person in articulating the pre-referral process to the entire school, and assuring that classroom teachers receive sufficient training to use the process effectively. Finally, the principal needs to make connections between pre-referral process and other aspects of instructional improvement in the school and the district. Pre-referral intervention should not be viewed by staff as a stand-alone entity. It needs to be connected conceptually and procedurally with other professional activities and school-based initiatives.

MANDATING PRE-REFERRAL INTERVENTION

On a system level, pre-referral teams are adopted most comprehensively and maintained when they are required. Pre-referral teams have been quickly established in states and local systems where there are legal requirements through state regulations (e.g., Pennsylvania), or as a result of court action (e.g., Chicago's *Corey H* settlement, 1998). The important aspect of a mandate is that it tends to energize the attention and support of central office administration at the local level. Resources are allocated and policies changed when there is an understanding that there will be negative consequences for noncompliance (Conway & Kovaleski, 1998).

Ideally, the establishment of state regulations or local policies coincides with a perceived need to solve a problem by local officials. For example, in Pennsylvania, instructional support teams were established in 500 school districts over a five-year period with comparatively little resistance because the mandate coincided with a statewide concern regarding increased special education costs due to over-identification (Conway & Kovaleski, 1998). Pre-referral teams are a type of school restructuring that requires intense effort over a short period to ensure institutionalization. Few school districts, especially large systems, are able to maintain focus on any initiative that progresses on an incremental, school-by-school basis. While a statewide mandate is not necessary, and is by no means sufficient, to assure that the process is operated with sufficient quality to be effective, it clearly facilitates the administrative commitment needed to produce system-wide change.

ASSIGNMENT OF STAFF

School staff, including consulting personnel such as school psychologists, needs time to serve on pre-referral teams. This function needs to be identified by both central administration and the school principal as equally critical to other activities such as conducting evaluations for special education. Many school districts have addressed this issue by dedicating individual personnel to the pre-referral role. In Pennsylvania, support teachers were assigned on a ratio of one to 500–750 students on a full-time basis to conduct pre-referral activities. If other personnel share the consultative role, then a full-time equivalent corresponding to this ratio is needed. For example, in a school of 600 students, if pre-referral activities are conducted by a school psychologist and two other specialists, each of these personnel needs to spend about one third of their time dedicated to these activities. Consequently, their workload in other areas needs to decrease by the same percentage. Imagining that pre-referral activities can be added to already heavy caseloads of busy practitioners dooms the process to failure.

ENSURING ACCOUNTABILITY

Because pre-referral teams are typically not mandated, it is important for school districts that initiate pre-referral teams to build in an evaluation of the program to determine its impact. Demonstrating that pre-referral teams are effective in meeting the needs they were intended to address is critical in maintaining long-term support for the process. Before implementation, school districts should put in place procedures to collect ongoing data that can be used for program evaluation. These data take three forms. First, data on improvements in academic variables for individual students undergoing the pre-referral process should be gathered. For example, Kovaleski, Gickling, Morrow, and Swank (1999) showed that students who were served by instructional support teams displayed increases in time on task, task completion, and task comprehension when the pre-referral process was implemented with a high degree of fidelity. A second level of analysis utilizes school-wide indicators, such as numbers of students served by the process, numbers of students referred for special education evaluations, and numbers of students retained in grade. Hartman and Fay (1996) thoroughly described these measures in their analysis of the impact of instructional support teams. A third type of evaluation that uses surveys of teachers and parents who have utilized the pre-referral process can be beneficial, but should be considered as the least rigorous and valid of the three types. Satisfaction with the process may not necessarily be related to outcomes for students.

TRAINING

The skills required to conduct effective pre-referral teams are complex and are often not included in typical teacher-preparation programs. Consequently, meaningful and sufficient training for members of the team as well as the entire school faculty is a critical aspect of implementing this process. All team members need to be trained in the fundamentals of collaboration, including communication skills, team building and maintenance, and an understanding of team roles and responsibilities. Individual members need training in curriculum-based assessment, behavioral assessment, and differentiated instructional strategies.

The format of the training program is also critical. Effective implementation is usually not realized if the training consists solely of didactic, group presentations. Rather, on-site consultation that features actual demonstrations of the skills and guided practice with practitioners is needed. For example, individual student assessment that leads directly to the development of ideas for instructional strategies can be modeled with students in an actual classroom situation. Similarly, a developing team can receive *in vivo* guidance from a consultant during a team meeting. Practicing school personnel, like all learners, learn best by doing, and by receiving specific feedback.

Process Factors

The aforementioned system factors are necessary to create an environment in which pre-referral teams can function. Once these supports are in place, there are a number of factors that need to be accomplished for pre-referral teams to realize meaningful outcomes. Some of these factors have been well established in the consultation and problem-solving literature. Others are proposed as a result of recent experiences with pre-referral teams.

CREATING A DATA-BASED PROCESS

The history of school-based pre-referral teams can be described as an increasing infusion of information into a collaborative team process for solving problems. Early work with TATs was characterized by teachers assisting teachers through problem clarification, goal setting, and brainstorming of strategies, without the systematic use of data obtained about the student or instructional environment. More recent models, including instructional consultation teams (Rosenfield & Gravois, 1996) and instructional support teams (Kovaleski et al., 1996), have incorporated the systematic collection of student and classroom data into all stages of the process. In a survey of the most critical factors of the instructional support team process, Bickel et al. (1999) found that assessment procedures such as curriculum-based assessment were critical to the following aspects of the process: using multidimensional assessment procedures to identify the student's instructional level and to forge a match with instructional materials, using obtained data to design individualized interventions, and using ongoing progress monitoring throughout the intervention to determine the success of the intervention. Each of these aspects of data collection is critical to effective pre-referral functioning.

Using curriculum-based assessment in the initial stages of the process helps to identify the problem with much more precision than an initial interview with the teacher. Many students referred for academic, or even behavioral difficulties, are found to be working at a frustrational level on the classroom tasks they are assigned. Gickling and Rosenfield (1995) defined this level as less than 93% known material during independent work and less than 70% known material during direct instruction. Finding that students are well below these levels during the initial assessment usually lead to a straightforward choice of the classroom strategy. Adapting the instruction so that the percentage of known material is increased creates an improved instructional match that usually results in rapid improvement (Kovaleski et al., 1999).

While using baseline data to inform strategy development increases the probability that a successful strategy will be implemented, pre-referral teams have

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found that even data-based strategy selection does not guarantee success. Consequently, these teams have effectively used graphed data for instructional decision making. Curriculum-based measurement techniques (Marston & Tindal, 1995) are particularly valuable when used frequently (e.g., twice per week), so that strategies can be altered if sufficient improvement is not observed.

SELECTING RESEARCH-BASED STRATEGIES

In the early literature on collaboration (e.g., Chalfant et al., 1979), brainstorming was used as a method for generating a bank of strategies to address the presenting problem. Teams were encouraged to "free wheel" and come up with as many diverse strategies as possible. The teacher would then be offered a choice as to which strategy would be adopted in the classroom. The basis for this procedure was the notion that teachers were more likely to implement interventions they found acceptable. However, given the advent of the extensive use of assessment data to guide strategy development, these procedures now appear to be unnecessary, or even counterproductive. Brainstorming may result in the generation of numerous strategies that have little empirical support and, therefore, little probability of improving student performance. Rather, based on the assessed data, pre-referral teams should focus on research-based strategies that have a demonstrated potency, leading to quick and meaningful changes in student performance.

An effective procedure for selecting strategies is empiric assessment (Braden & Kratochwill, 1997). Colloquially, this tactic has been termed the "Maalox™ approach." The concept refers to a physician, who, when presented with a patient describing gastrointestinal distress, prescribes a regimen of Maalox™ prior to conducting expensive and time-consuming diagnostic testing. Physicians take this approach because in most cases, Maalox™ works, avoiding further interventions. Applying the Maalox™ approach to schools, pre-referral teams are encouraged to attempt high-probability strategies that have demonstrated research support and are likely to show quick and effective results before conducting lengthy evaluations that may not lead to beneficial interventions. Thus, one important function of pre-referral teams is to maintain focus on objective research literature in regard to various instructional strategies.

ESTABLISHING THE INTERVENTION

An aspect of effective pre-referral team functioning that has not received attention in the professional literature is the need for consulting personnel to assist with the initiation of interventions in the classroom after the strategy is selected. In this procedure, the team member works with the student in the classroom in an individual or group format to "systematically search for what works" (Kovaleski et al., 1996). By taking a hands-on approach, the consultant assures that treatment fidelity is accomplished and models the strategy for the classroom teacher in a peer-coaching format (Joyce & Showers, 1982). For example, if the initial assessment showed that the student could recognize few sight words, the school psychologist might use a "fold-in" strategy (Gickling & Havertape, 1981) with the student in the classroom. Working for approximately 15 minutes per day over the course of a week, the psychologist could introduce new words, practice newly learned words, and chart the students progress to determine if the strategy were working.

This practice is a departure from the "just-talk" approach typically described in the consultation literature. Teams that do not have one of its members establish the intervention in the classroom will likely find lower levels of treatment fidelity and higher levels of teacher resistance. Unless there is ongoing support with the intervention, teachers will likely be uncomfortable with the intervention even if they are involved in the initial selection process. In contrast, having team members work directly in the classroom, for at least part of the intervention, serves to increase teacher acceptance and facilitate eventual incorporation of the strategy into the classroom routine.

INCORPORATING THE INTERVENTION

Having a team member establish the intervention in the classroom leads directly to the next step of effective pre-referral team practice, assuring that the team finds a practical way to incorporate the strategy into the teacher's day-to-day instructional routine. This step involves the team's working with the classroom teacher to develop a specific plan as to how the strategy that has been found to be effective in the early stages of the intervention period can be adopted by the teacher without further on-going support. It is important at this stage of the process for team members to be knowledgeable about the practical aspects of classroom teaching and the teacher's individual preferences for classroom instruction. Unless the team can determine with the teacher a viable method for incorporating the strategy into the teacher's large or small group instruction, the intervention has little chance of being maintained for the student. Along with establishing the intervention, this step is a significant departure from the more typical procedure of pre-referral teams of recommending a strategy and checking back later.

INVOLVING PARENTS

Many pre-referral teams have excelled in intensively involving parents of the students identified in the team process. In these schools, parents have provided information as part of the initial assessment, given input on the selection of strategies, and have participated in final outcome decisions. Teams have designed strategies for parents to use at home as part of the overall intervention for their children, and some have provided special training for parents in the instructional techniques most frequently utilized in the team process. Communication throughout the process and active involvement in the resolution of the difficulty have helped schools maximize the important roles parents play when their child has a problem.

Pre-referral teams must use caution when working with parents to not abrogate their due-process rights under IDEA. Parents have the right to a full and individual evaluation if they suspect that their child may have a disability. Teams should respond accordingly if a formal request of this nature is made. However, in many cases, when working in an early intervention mode, parents ask generically for help rather than request an evaluation *per se*. A prudent course of action is to fully inform parents of the procedures and benefits of pre-referral intervention while apprising them of their rights to a comprehensive evaluation. Many parents are willing to support a period of pre-referral intervention, especially if there is sufficient accountability through the setting of measurable goals from the outset of the process. In addition, it is important for pre-referral interventions to be time-limited. Fifty school days from the initial expression of concern by a teacher or parent to the completion of the process (including assessment, intervention, and evaluation of progress) is generally enough time to assure that the intervention has had time to work while protecting the parents against an unnecessary delay in conducting an evaluation, if needed.

SCREENING FOR FURTHER EVALUATION

Because one rationale for existence of pre-referral teams is to decrease the number of students in special education, many states and local school districts have required pre-referral teams as a prerequisite for the evaluation of students suspected of having disabilities. As was indicated earlier, Kovaleski and Prasse (1999) have argued that using pre-referral intervention as a screening for special education is an effective way to check for a lack of instruction, a requirement of IDEA. The role of the pre-referral team is to determine whether students who make sufficient progress during the intervention period are, in fact, displaying a lack of effective instruction rather than evidence of a disability. This determination can be based on the success of the team in producing improved performance for the student by using methods that are feasible in a general education setting. If the student makes tangible progress as a result of pre-referral intervention, then it can be concluded that the student was reacting to a lack of instruction, and has little need for specially designed instruction. In contrast, if the student fails to improve in response to a well-designed pre-referral intervention, then a lack of instruction is unlikely. Rather, the student is displaying more needs than can be met through general education services only. In making this determination, the pre-referral team can determine whether discrepancies in performance are the result of a lack of instruction and can be corrected without special education, two salient requirements of IDEA.

SUMMARY

There is strong support for school psychologists working in pre-referral teams to assist schools in developing high quality interventions for students who display academic and behavioral difficulties. While individual consultation skills are a necessary prerequisite for this work, the team format itself appears to be an important vehicle for assisting individual students and facilitating systemic change. Working in a team format during a pre-referral process requires the school psychologist to have skills in both consultation and in the team process itself. School psychologists can help school systems create organizational change when they position themselves as part of the group that is invested in school restructuring. School psychologists need to work closely with principals to support their site-based leadership of the pre-referral team and with central office administration in the development of a rationale and plan for change. Because of their expertise in both assessment and research procedures, school psychologists can also assist in designing accountability measures to appraise the results of the work of pre-referral teams.

On a process level, a salient conclusion of this chapter is that school psychologists need to move beyond a "just-talk" role in consulting with pre-referral teams. An effective pre-referral process requires the extensive use of curriculum-based and behavioral assessment. In addition to this assessment function, school psychologists need to become active members in establishing interventions in classrooms and helping teachers incorporate strategies into day-to-day teaching practices. These activities may be the most foreign to those school psychologists who have considered consultation to be largely an indirect-service activity. However, it appears clear that actively engaging with students and teachers in the classroom is critical if interventions are to live beyond their initial development. The extent to which school psychologists are willing to adopt this hands-on approach may not only impact the effectiveness of pre-referral teams but may also determine whether school psychologists are invited to participate at all.

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43 Best Practices in Problem-Solving Team Structure and Process

Annette M. Iverson
University of Northern Iowa

OVERVIEW

School-based, problem solving teams (PSTs) that focus on intervention design and implementation have been functioning since the late 1970s. New and improved variations of PSTs continue to be developed in order to address various obstacles to team effectiveness. One major obstacle is the lack of process skills needed to effectively problem solve for interventions in teams. Someone needs to take the leadership role in assisting teams to develop process skills. School psychologists are a logical choice for providing such leadership. This chapter describes practices that school psychologists can use to facilitate team problem-solving processes. Processes are limited to team structure (e.g., allotted time, roles of members, team membership) and use of communication process skills (e.g., listening, including, refocusing) that support systematic decision making. This chapter is not about the content of problem-solving questioning or interviewing, data gathering, and other aspects of systematic decision making for intervention planning. These competencies are critical to the success of problem solving for interventions, and readers are directed to additional chapters of the text for pertinent information.

Team problem solving in schools takes many forms. One historic form is multidisciplinary teams that focus on the tasks of diagnosis and special education placement. A more recent form of team problem solving focuses on intervention planning with the goal of maintaining all children in the general education curriculum to the greatest extent possible.

Simply knowing that teams engage in problem solving reveals very little about their processes (Barnett & Zucker, 1990). Team processes, as defined here, are group structure and communication dynamics that enhance, or detract from, intervention planning and implementation. When problem-solving content changes (e.g., from diagnosis and special education placement decisions to intervention planning and maintenance in regular classrooms), processes must change, also, or goals will not be attained. Process is helpful in all forms of team problem solving. It is especially critical to consider when teams are attempting to set aside prior problem-solving forms and learn new skills.

History

Multidisciplinary teams were mandated as the decision-making body for special education entitlement when P.L. 94-142 was signed in 1975. Reasons for the team approach were to limit the decision-making authority of any one professional, to make sure different perspectives from diverse group members were considered, and to involve parents in decision making about their children.

Many school psychologists were educated and continue to be educated to participate in multidisciplinary teams that process referral problems from either a diagnostic perspective (e.g., Does the child have a disability?) or an administrative perspective (e.g., Does the child qualify for special education?) (Macmann et al., 1996). This approach represents a decision frame that has come to be known as the "test and place" approach to problem solving. Historically, the development of solutions or interventions in the "test and place" approach was viewed as part of the multidisciplinary team problem-solving process. The process generally yielded one common solution (i.e., placement in a special education program).

After 1975, teams that focused on intervention design were mandated or recommended by most states (Carter & Sugai, 1989). Pre-referral teams, student assistance teams, building assistance teams, teacher assistance teams, and similar names have been used to designate problem-solving groups that have as their goal the design of interventions to help children be successful in the general education curriculum. For clarity in communication, PSTs will be used throughout this chapter to refer to all groups who engage in processes that result in interventions. PSTs are distinct from traditional multidisciplinary teams (MDTs) that focus on diagnosis and placement. Disability diagnosis is rarely a goal of PSTs, and the question of special education entitlement is considered only in the final phase of ongoing problem solving.

There were no federally mandated models for accomplishing the intent of the law. Two major models emerged: (a) teams with broad participation and problem-solving approaches that placed the initiative for action in the hands of general education teachers and (b) teams that emphasized consultative approaches in which a specialist was the key provider to the referring general education teacher (Telzrow, McNamara, & Hollinger, 2000).

Barriers for broad participation teams were identified by Anderlini (1983) and Pfeiffer (1980) as:

1. A lack of systematic decision-making processes
2. A lack of interdisciplinary collaboration and trust
3. A lack of family involvement
4. A lack of education and training in team processes

It is the final barrier, lack of training in team processes, that is described here with best practice suggestions. Empirical bases for selecting team structure also are presented to help school psychologists guide schools in selecting the best fit for their culture and legal requirements.

Major Issues

School psychologists typically have the process skills to participate in MTD meetings when the goal is diagnosis and special education placement. However, when the decision frame changes to a focus on intervention design, many school psychologists are not sure what group processes to implement. Principals, teachers, parents, educational consultants, and other team members also do not know what the process looks like or sounds like.

One difference is that the questions and tasks of the team completely change (e.g., How can the instructional environment change to match the learner's needs?) (Macmann et al., 1996). A second difference is that group process skills must be used by all but often are unknown to team members. Members resort to trial and error, often with disappointing and frustrating results. Effective processes can make the difference between team members leaving the problem-solving meeting with intervention plans or without plans and, consequently, feeling their time was wasted.

RESEARCH ON TEAMS

Little research has been conducted on processes affecting the success of PSTs in schools. Fuchs, Fuchs, Harris, and Roberts (1996) conducted a 4-year study of team problem solving. They determined that broad participation teams were ineffective in terms of student outcomes and teacher satisfaction and, subsequently, reduced team membership to a consultant and consultee. Fuchs and Fuchs (1996) noted that broad participation PSTs were not based on empirical evidence of student outcome efficacy.

Welch, Brownell, and Sheridan (1999) reviewed refereed journals from 1980 to 1997 and found 18 articles on school-based PSTs. Over half were categorized as technical guides or position papers. Only one-third were empirical studies, and PST outcomes tended to be based on members' self-reports of satisfaction rather than student benefits. In a more recent study, Telzrow, McNamara, and Hollinger (2000) examined MDT problem solving and the relationship to student outcomes in 227 schools. Although each school submitted its single best case of the year, results indicated that reliable implementation of problem solving was not achieved. Years of MDT participation in problem solving were unrelated to reliable implementation, and benefits to referred students could not be determined.

Despite empirical evidence to the contrary, and armed primarily with anecdotal evidence, many proclaim the superiority of groups over individuals. Team approaches are based largely on a number of assumptions about the benefits of group decision making. Research suggests, however, that interacting groups are not likely to exceed the performance of the group's best member (Hill, 1982, cited in Salazar, 1995). Pavitt and Curtis (1994) noted that the "best member" model of team problem solving suggested that the odds that a group will find the correct solution are the same as the odds it contains a competent group member.

"Assembly effect bonus" is a group process outcome documented in a few studies. It suggests that the group is able to do something that could not have been achieved by any member working alone or by a combination of individual efforts. Although there is scant research evidence for "assembly effect bonus," the idea is appealing and may underlie the trend in collaborative, team problem solving in schools.

Likewise, groups have made decisions that were less than what could be achieved by its best member (Libby, Trotman, & Zimmer, 1987). This has been termed "process loss." It is attributed to faulty group interactions, resulting in poor decision making. For example, group problem solving can result in members merely confirming the commitment to one another's present practice. Process loss may be avoided by improving group interactions.

Based on their work in over 60 schools in four states, Rosenfield and Gravois (1996) found broad participation team problem solving of individual referrals to be an impediment to addressing classroom teacher concerns in a timely fashion. They changed the tasks of team meetings to an emphasis on systems-level problem solving. Ongoing training of members, monitoring and documentation of case outcomes, and ensuring that systems interventions were implemented in ways that served the needs of all children became the team focus.

Teams assigned individual referrals to members on the basis of skills and interests. The assigned team member became the case manager and employed systematic problem solving with the teacher and parent(s). This practice is in alignment with the "best member" model of team problem solving.

In summary, it would be a mistake for school psychologists to have unconditional and non-reflective enthusiasm for broad participation team problem solving. It is possible, however, for school psychologists to base team practices on findings from the following bodies of literature: (a) teacher reports of satisfaction with specific team processes and team effectiveness (e.g., Aksamit & Rankin, 1993; Chalfant & VanDusenPysh, 1989), (b) efficacy results noted in studies of the explicit problem-solving processes of behavioral and conjoint behavioral consultation (e.g., Elliott & Sheridan, 1992), and (c) the extensive literature on school and organizational change (e.g., Fullan, 1991).

RESOURCES OF TEAMS

Despite the popular notion that team members are collaborative generalists, the emphasis in this section is on recognition of expertise as an important resource. "Practitioners as generalists" stemmed from problem solving research of the 1970s. The focus was on general strategies or abilities needed to solve problems and the role of experience was downplayed.

In the 1980s, research in computer assisted diagnosis, consultation, expert systems, and artificial intelligence clarified the need for an extensive knowledge base and experience to solve problems. Novices do not become experts overnight. The development of expertise is very complex. Becoming truly expert is about a 10-year process of deliberate practice. Accordingly, research in problem solving has shifted from a focus on general strategies of reasoning to the structure of expert knowledge.

Expert and novice problem solvers tend to be alike in their knowledge of strategies, depth of processing, and number of alternative routes they explore (Elstein, Shulman, & Sprafka, 1990). The differences are that experts linger on the identification and definition of the problem, thereby enhancing the probability that the solution will be a quality one. Experts also seem to have definite ideas about what data would be necessary to solve the problem and are more selective about the data they collect than are novices. Experts explore better alternatives because of differences in their structure of knowledge rather than differences in knowledge of strategies. This suggests that persons with the most expertise in the referral or target problem and in data collection should take the lead role in collaborating with teachers and parents to define the problem, develop the data collection plan, and select the intervention(s).

Being an expert in test and place forms of problem solving is likely to interfere with learning problem solving for interventions due to the inhibitory effects of early learning on acquisition of new material (Bruning, Schraw, & Ronning, 1999). An early and important example of this is functional fixedness, loss of the ability to view the familiar in a novel way (Duncker, 1945). New content and processes can be learned, but learners must commit themselves to a steady regimen of practice and feedback that includes supervision by highly skilled mentors.

Research findings provide some criteria for determining who are the experts. The use of peer nominations to select experts has been discarded for the most part. Peers tend to know little about the expertise of their colleagues and make their selections on the basis of whom they trust. Years of experience, specialty certification, and occasionally rank or responsibility have become the accepted indicators of expertise.

A combination of less experienced and more experienced team members potentially could be a wise selection. Less experienced team members, when recent graduates of institutions of higher education, may be informed about the process of problem solving for interventions. More experienced team members, on the other hand, may have expert knowledge structures helpful in data collection and exploration of better solutions. Respecting members' differing areas of expertise facilitates team functioning.

All team members have their own particular areas of expertise from which to draw throughout the problem-solving process. One example is that parents know their child best, hold an important vision for their child, and are the child's strongest advocates. Parents are experts on what has worked for their child in the past and what the family can do to support new interventions.

BASIC CONSIDERATIONS

Team structure and process skills are an insufficient foundation for developing interventions in PST meetings. School psychologists may need to be open to changing their beliefs in order to change their practices. Beliefs about how the world is and should be drive the questions, define the tasks, and guide the decisions of team members. School psychologists also need to develop competencies in behavioral consultation, conjoint behavioral consultation, assessment techniques that link directly to research-based interventions, and measurement for progress monitoring.

When team members do not have explicit education and practice in problem-solving processes, communication during meetings may resemble Stack's (1997) findings. She analyzed communication units from problem-solving meetings in which team members were attempting to change from processing referred students for special education placement to processing for intervention design.

Although systematic problem solving appeared in the teams' documentation, communication resembled traditional test and place dialogues. Most of the members' communication units centered on identifying the problem (66%) with little or no time spent in the other areas (i.e., define, apply solutions, look back, and evaluate). Many units that identified the problem referred to characteristics within the child or the child's home environment. Dialogues of three cases that show team members continuing to work from the decision frame of pathology within the child and/or family needing diagnosis (e.g., Does the child have a disability?) are in Table 1. The outcome for each child was special education placement (e.g., Does the child qualify for special education?).

In problem solving for intervention, the dialogue at problem identification and definition sounds more like the following, using case 1 from Table 1 as an example. The emphasis is on what Joey can do in reading, the instruction he has received, and the outcomes of the instruction. The communication units move the process toward brainstorming interventions and away from communication about IQ-achievement discrepancies that lead to diagnosis and placement.

Teacher: "Joey has difficulty with reading."

Team facilitator: "Tell me more about it" or "What can Joey do well in reading?"

Teacher: "He tries to sound out every word. He can do it but it slows him way down and everyone is sitting there waiting on him. He is r-e-a-l-l-y slow."

Team facilitator: "You see Joey relying on sounding out words as a major reading strategy. What additional reading strategies do you see Joey use?"

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Table 1. Communication units for teams learning to problem solve for interventions

Case 1

"Joey has difficulty with reading…He is the lowest reader in my group…He is r-e-a-l-l-y slow…He will be 7 on March 18…I think his I.Q. is a little lower…Yes, I think his ability is low…What are his MRT scores?"

Case 2

"Sandra has no concept of numbers, letters, subtraction…She missed a lot of school…She is very eager to please, but I have a feeling the problem could be coming from home…I think Mom spends a lot more time with the older sister…Mom has a short fuse."

Case 3

The teacher began by saying, "This is an academic concern…I don't see any developmental problems."
Team member asked, "Socially is Susan doing ok?"
Teacher, "Well, her behavior is going downhill rapidly."
Team member asks, "Is it seizures? Is it true LD?"
School psychologist replies, "If it were LD, we wouldn't be identifying it in kindergarten."
Teacher, "The parents move frequently."
Nurse, "Have we tried an ACTrS?"

Teacher: "Nothing else. If he can't sound it out, he eventually just quits and sits there. He is the lowest reader in the group."

Team facilitator: "What instruction in additional strategies has Joey received? What have you tried so far?"

Teacher: "I tell them all to skip unknown words, read ahead, and decide what makes sense. But Joey doesn't know enough words to benefit from that. He doesn't even know all the basic sight words. We started working on those but I don't have enough time…"

The above dialogue yielded information that could be used for brainstorming interventions that the regular classroom teacher and home could collaboratively implement (e.g., Word Wall, flash cards, selection of books in which Joey has prior knowledge/vocabulary/high interest).

In case 2, the communication process skills illustrated later in the chapter would be helpful. For example, the teacher began with math concerns. Someone in the group turned the focus to home problems. Given what was said about Sandra's mother, the home was not represented at the problem-solving table. The skill of refocusing needed to be used. It might sound like this:

Team facilitator: We have two separate issues on the table. The referral concern is academic, specifically difficulty with number and letter concepts. The second issue is questioning whether there are home difficulties. Let us concentrate for now on the academic concerns that we can define and invite Sandra's mother to collaborate in helping her daughter.

Stack further described her observations of problem-solving meetings as multiple conversations occurring at the same time and loosing sight of the children and their needs while conversing about possible pathologies and rules and regulations. Teachers consistently expressed helplessness and frustration with the new process. They openly stated that it was a waste of time, a new administrative hoop to jump through to place students in special education programs.

Without basic competencies for not only school psychologists but also other team members, communication will continue to sound like engagement in a "test and place" process. Paperwork might look like problem solving for intervention design but process will not.

BEST PRACTICES

Based on student outcome data, there is clearly more empirical evidence to support the use of specialist teams than the use of broad participation teams in the problem-solving process. Broad participation teams abound and anecdotes suggest that some are successful. As a general rule, the more people on the team, the more critical group process skills become. The less expertise that team members have in problem solving for interventions, the more critical group process skills become. Regardless of the type of teams in their schools, school psychologists are encouraged to assist them with the necessary structure and process.

Team Structure

TIME FACTORS

Notably, time factors are the most frequently cited problem area both for elementary and secondary PSTs that are composed of broad participation. In fact, administrators have identified teachers' willingness to put in extra time and effort as a major factor contributing to effective teams (Aksamit & Rankin, 1993). School psychologists can help foster beliefs that it is normal and expected to do more and different things for referred students.

Finding meeting times, meetings taking too much time, and lack of time to accomplish all that is required in problem-solving meetings are specific areas of concern (Aksamit & Rankin, 1993). It is recommended that teams select a specific time of the week to meet and allow nothing to interfere with it. Teams that meet on a regular basis, and at a specific time, more quickly become an accepted part of the school culture.

In addition to setting a specific time, it is important to set an adequate length of time for team meetings. Team decision making has been shown to be adversely affected by time constraints. Specifically, PST members said lack of sufficient time to problem solve and make decisions was their most frequent concern. The quality of their decisions was impaired by the apparent need to rush through cases in order to stay on schedule. This is less of a problem when a given meeting time is devoted to processing one referral.

Teams are made aware of the passing of time when they appoint members to the role of timekeeper. This can assist team members in knowing when to use group facilitation skills of refocusing and limit setting. Timekeepers help teams complete the step of generating and selecting solutions before teachers or parents must leave for other commitments.

MEETING PREPARATION FACTORS

Teams function within the established time limits when members come prepared. For broad participation teams, it can be useful to appoint a consultant/case manager prior to the first problem-solving meeting of any given referral. The case manager can document the referral reason, review records, assist the teacher in bringing helpful information to the meeting, and interview the parents. Case managers summarize preliminary findings in written memos provided to team members prior to the meeting. Premeeting efforts can greatly reduce the amount of meeting time spent on the first step of problem solving, identifying the problem. The team can move more quickly into defining the problem, followed by brainstorming solutions, and designing the plan.

MAKING THE PURPOSE OF THE MEETING EXPLICIT

Effective decision-making practices consist of several components. First, the purpose of the meeting must be made explicit. This might not seem like a big revelation, but research has shown that the purpose of meetings was seldom explicitly stated (Ysseldyke, 1983). Begin each meeting by explicitly stating the purpose for meeting and clarifying the steps of problem solving. Introduce the steps in both oral and written form at the beginning of problem-solving meetings. Explicitly point out each step as the team engages in it.

Provide members with copies of the interview questions that will be asked during problem identification, problem definition, and each subsequent phase of problem solving. Appropriate questions are found in conjoint behavioral consultation or behavioral consultation (Kratochwill & Bergan, 1990) and instructional consultation literature (Rosenfield & Gravois, 1996). Remind members that the referral sources (e.g., teacher and parents) will be asked for their input first.

TEAM STRUCTURE: CASE MANAGEMENT MODEL

Team structure developed and implemented by Rosenfield and Gravois (1996) is notably different from broad participation team structures. They recommend using teams that consist of the school psychologist, guidance counselor, one or two administrators, reading teacher, one to three special education teachers, two to five general education teachers, and as many as four additional educators. The team meets face-to-face on a frequent basis. There is a focus on the development of group process skills and positive interdependence. All members receive ongoing training in case management (e.g., consultation, intervention design, progress monitoring). Members hold one another accountable for individually assigned responsibilities and engage in regular assessment of team functioning. Systems level needs are discerned based on referral patterns and team members facilitate systems change accordingly.

Referrals are made to the team leader/facilitator. At team meetings, members determine who to assign as case managers on the basis of skills and interests. Teachers on the team are assigned no more than one or two cases at a time; other team members often can be assigned more than two cases. Case managers become consultants who bring parents and teachers together for problem solving. This constellation forms a small team of the following three to four people: consultant, referring teacher, and parent(s). Conjoint behavioral consultation is a made-to-order match for this team structure.

TEAM STRUCTURE: BROAD PARTICIPATION MODEL

In contrast, broad participation team problem solving requires all team members to meet with parents and teacher(s). At initial levels of referral, prior to consideration for entitlement to special education, members consist of building level personnel (e.g., principal, general education teachers). A typical constellation of group members is the building principal and/or the building director of support services, guidance counselor, general education teacher(s), special education teacher, and parent(s) of the referred child. These group members tend to meet once a week at a regular time. They may process from one to several cases at each meeting. It is rare that any one individual member is assigned to work with parents and teachers. Support personnel (e.g., school psychologists, social workers, speech and language clinicians) usually are not involved at the initial levels of problem solving. They become involved when the assistance team wants help in designing more successful interventions.

ROLES AND EXPECTATIONS OF TEAM MEMBERS

One of the primary objectives of teams is to effectively use the resources of each individual member. When team members feel their area of expertise is infringed upon, they view team collaboration as a surrender of power and influence. As a result, they develop negative attitudes toward PST members and team decision making. Inter-professional tension can become a powerful inhibitory barrier to successful team functioning.

Wynn and Guditus (1984) found that teachers showed a strong preference to be involved in decisions directly related to their work in classrooms. Participation in the group process was related to satisfaction with decisions and commitment to implementing them. School personnel also gave more favorable ratings to teams that possessed the highest degree of collaboration.

One solution is to assign members to roles that use their interpersonal and professional strengths and provide them with explicit oral and written role expectations. Typical roles are leader, time keeper, recorder, case manager, and member. The role of parent advocate is not assigned typically. It is a critical role that can better use team resources to enhance outcomes (Brown, Pryzwansky, & Schulte, 2001).

Groups may be dominated by one or a select few members with strong personalities who may persuade the remaining members to accept underdeveloped solutions or inadequate recommendations. More powerful members must recognize their authoritative position and strive to work with others to redistribute power. School psychologists and special educators provide a disproportionately larger input when compared to other members of the PST. Classroom teachers and families are less active participants. This has led to less satisfaction with team decisions and little internalization of the team's proposed educational plan by the people most responsible for implementing it.

Explicit knowledge of roles and expectations can help mediate power imbalances. An additional strategy is to structure communication so that members contribute in an organized manner. Teacher and parents are asked to contribute first and are provided ample prompts and support. Additional members are called upon to contribute later. In summary, plans will be implemented when all PST members are actively participating. This is true whether the plan is a single intervention, a modification for a classroom, a program change, or the restructuring of an entire service delivery system.

Group Process

Researchers have suggested one of the underpinnings of quality PSTs is systematic decision making. Yet PSTs in education have been criticized for their loosely structured and nonsystematic decision-making processes. Skill deficits in obtaining, organizing, and presenting information can doom decision making to failure.

Local education personnel most likely to have skills in group process are guidance counselors, special education teachers, and school nurses. Typically, principals and regular education teachers do not have training in group process skills. However, they may have developed group process skills or have an interest in developing skills and should not be overlooked as possible team leaders. Research reports of who leads problem-solving assistance teams vary from coordinators and teachers at the elementary level to support personnel and teachers at the secondary level (Aksamit & Rankin, 1993). Support services personnel such as school psychologists, social workers, and educational consultants may have group process skills and be able to train others.

FACILITATING GROUP COMMUNICATION

Facilitation is an important process skill. A common dictionary definition of facilitate reads "to make easy or easier." For a group leader to facilitate means to assist, encourage, foster, and support group members in order to make it easier for them to participate successfully in the group. Any group member with process skills can assist the group in constructive processing, also. In the following example, Kyle is the group leader, and he uses several small group process skills to help group members communicate and participate, build trust, and help the group make difficult decisions. Note that Julie, who was not the leader but a member, helped the group by using the process skill of refocusing.

Kyle is leading the assistance team in a problem-solving meeting. Kyle set the tone for the team's task by directing everyone's attention to the list of problem-solving steps posted on the wall of the meeting room. He provided brief and explicit descriptions of the steps and then stated the purpose of the meeting.

Throughout the meeting, the team challenged him in several ways to pay close attention and help them process effectively. Kim always had a lot to say. She would have talked non-stop if Kyle had not interrupted, thanked her for her contribution, and asked the parent and the teacher, respectively, questions to help define the problem. There was a tense moment when Willie and Clare began debating about the reasons the referred student was having difficulty. Their discussion would have escalated and taken over the rest of the meeting if Julie had not refocused the conversation. The observations Clare shared were helpful in defining the target problem of the referred student. Julie summarized what she had said and asked others what they had observed. During brainstorming of solutions, Kyle noticed that Julie was unusually quiet. He made a point of inviting her to participate. After brainstorming, Kyle led the team in the process of deciding exactly what they would do in the next few weeks.

Effective group leaders and members keep a pulse on communication in the group. One way they do this is by periodically asking themselves questions such as:

- *Are the major stakeholders (e.g., teacher, parent) encouraged to be active participants?*

- *Is everyone getting a chance to speak?*

- *Are the speakers' messages appropriate to the current problem solving stage in which the team is engaged?*

- *Are there any topics the group is avoiding?*

This chapter cannot provide a detailed account of all skills necessary for effective group leadership. However, basic, foundational, group process skills are described below. Examples of what to say and when to say it are included in Tables 2–5.

LISTENING

Facilitating effective group communication through listening is the first skill set and can be found in Table 2. At the foundation are the active listening techniques; that is, listening both for the facts and beyond the facts for feelings, attitudes, assumptions, and beliefs. Many school psychologists learned these basic techniques in counseling courses. Listening techniques, used effectively in group settings, let speakers know they are being heard, understood, and encouraged to say more.

Asking for clarification includes asking group members to give reasons for what they have said, encouraging group members to think through what they are saying, and encouraging the expression of wide-ranging and well-thought-out opinions. Seeking clarity is a critical communication skill to use

Table 2. Facilitating effective group communication

Skill	*When you use this skill, you:*	*Examples of what to say*
Active listening	*Clarify:* Ask for information.	Tell me more about that. Then what happened?
	Reflect: Say back the content, feelings, attitudes, or opinions you heard.	It seems that you feel... Your perspective is...
	Encourage: Assure the speaker you would like to hear more.	When we develop our strategy, please tell us more about what your experiences were.
	Summarize: Sum up what was said.	Let me make sure I understand everything...
	Explore implications: What does the speaker think this means?	What do you think about that? How do you think this will affect...?
Seeking clarity	Use open-ended questions that can't be answered with "yes" or "no."	How do you... What do you think about...
	Ask someone to clarify her/his comment.	He tantrums? What does he do?
	Ask others to express their thoughts on a comment someone else made.	Diane wonders if the tantrums are to avoid doing work. What do the rest of you think?

Table 3. Encouraging group participation

Skill	*When you use this skill, you:*	*Examples of what to say*
Including	Provide opportunities for members to participate with a minimum of risk; request, but don't force, involvement.	Let's hear everyone's experience with the tantrums. If you don't have anything to share, you can pass.
	Acknowledge quieter individuals' comments to build their confidence, but don't overdo it and embarrass them.	Thanks for sharing that. That helps me understand where you're coming from.
Affirming	Openly thank a group member for a comment, and say why you're expressing your thanks.	Thank you for telling us about his alcoholism. It may change what we do. Thanks, Pat, for sharing what you do to help him calm down. Now we can try those things, too.
	Make a positive observation about what a group member says.	What a positive way to view it! I can tell you've thought carefully about that. I appreciate your trusting us enough to say that.
	Agree with what someone says.	I have noticed that before, too.
Extending	Draw attention to a member's comment to get a discussion going or to draw others into discussion.	That's a creative approach to this situation. What do others think about that? Thanks for that observation, Nancy. Does that bring a new idea to mind for anyone else? That's important information about this intervention. Has anyone else read or heard of something we should consider in our intervention design?

(Table continues on the following page.)

Table 3. (continued)

Skill	*When you use this skill, you:*	*Examples of what to say*
Refocusing	Point out that the group has gotten side-tracked.	We've gotten off the track a bit. Let's get back to step 2, defining the problem. Mary, what do you do when Janell is drawing instead of writing?
	Give an alternative to continuing the discussion now.	I can tell this is really important to several of us. Let's take some time to think about it this week. It will be on the agenda of the next meeting. Let's get back to…
	End or postpone the discussion or bring it back within appropriate limits.	You know, this issue is something that needs to be dealt with by those directly involved. Let's table our discussion of it until they can participate. What we can discuss right now is…
Limit setting	Assertively manage the behavior of individuals in the group when necessary, for example, with those who monopolize discussion. Matter of factly direct the actions of the entire group when necessary.	Jan, let's hear some other people's ideas on that. Mark, I want to make sure everyone has time to share. Let's get started. Let's get back to the subject. We've spent all the time we can on that.
Intervening	Call attention to something that has hurt someone's feelings.	Some things have been said here that might have hurt John's feelings. It is important that we are respectful at all times. John, how are you doing?
	Point out a dynamic in the group that is not in the group's best interest.	It seems to me that whenever someone talks about a problem, the rest of the group wants to fix it right away. Let's wait until after brainstorming all possible solutions…
	Help group members resolve a conflict.	Our discussion has turned into a disagreement. Let's take some time to find a solution that helps us work together collaboratively.

Table 4. Building trust and group cohesion

Skill	*When you use this skill, you:*	*Examples of what to say*
Self disclosure	Share from your life experiences to let group members know that you, like they, are not perfect.	Now here is something I've always had to struggle with. This is really difficult for me to talk about because… When something like that happens to me, I feel so inadequate. I sure blew it once when I…

Table 5. Group decision making

Skill	*When you use this skill, you:*	*Examples of what to say*
Brainstorming	Explain the rules.	Anything goes… Write the ideas on a chalkboard or easel.
	Solicit ideas as fast as they come from whoever has them or round robin.	Let's proceed around the table. Say pass if you don't have an idea when it is your turn.

(Table continues on the following page.)

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Table 5. (continued)

Skill	*When you use this skill, you:*	*Examples of what to say*
Sorting down	Give each group member a certain number of votes.	Vote for your top two picks.
	Take a show of hands on each item.	Raise your hand if student choices is one of your top picks.
	Sort the list down to items that received the most votes.	Four or more votes went to give choices and provide picture cues.
	Repeat the process if you still need to reduce the total number of ideas.	

throughout problem solving, particularly during the problem definition stage but also during subsequent stages. See Table 2 for examples of different uses of this skill and what to say.

ENCOURAGING GROUP PARTICIPATION

Effective group leaders and members make sure each group member has a chance to participate. Leaders not only encourage quieter group members to get more involved, but also keep more active members. from taking over. Table 3 lists including, affirming, extending, refocusing, limit setting, and intervening as skills used to encourage balanced and task appropriate participation by the various group members.

Including techniques help members draw more reluctant or quieter participants into discussions and sharing. Quieter members are often parents and teachers, the very members that need to be active participants. When affirming, respond positively to group members as they participate in group activities. Members need to be on the lookout to affirm each person in the group, including quieter individuals.

Extending is a way to get the most out of group members' comments during a discussion. It invites others in the group to share their thoughts on the same topic. Members must be careful to use extending appropriately because team members often report that there is insufficient time for quality problem solving. See Table 3 for examples of the use of extending.

Refocusing means getting a discussion back on track, ending a discussion, or keeping a discussion appropriate. This group process skill may need to be used often when team members are first learning how to problem solve for intervention design. If a team member thinks she cannot be assertive in refocusing group discussion, then she may not want to volunteer for the role of team leader. Table 3 provides examples of refocusing.

Gently letting the group know that it is time to stop something is limit setting. See Table 3 for examples of how it provides the opportunity for others to participate in the group. This is another facilitation skill that may feel too assertive to some members. They may determine that they do not want the role of team leader.

Intervening is stronger than limit setting. Use this skill on the rare occasions it is needed. Intervening means doing whatever has to be done to stop potentially destructive behaviors, such as ganging up on one group member, breaking confidentiality, bullying a group member, or being insensitive to others' feelings. Use as little force as necessary to end a destructive behavior, but make sure it stops. See Table 3 for examples.

BUILDING TRUST AND GROUP COHESION

Groups' cohesiveness increases in proportion to the trust its members feel in one another. Group leaders can use a variety of techniques to offer ongoing opportunities to group members to build and maintain trust. Most techniques rely on the skill of disclosure, shown in Table 4. Disclosure involves sharing one's thoughts, feelings, and experiences. Modeling self disclosure is a way of teaching group members about this important tool for building relationships.

GROUP DECISION MAKING

From a group's first meeting to its final stages of maturity, group members need to know how to make decisions. Decisions can range from the very simple to the challenging. There are three steps that are useful in many different decision-making situations.

Brainstorming is a creative way to come up with more than one right answer. See Table 5. The rules for this technique are the following: Anything goes. All ideas are welcome. It is okay to piggyback on someone else's idea. The wilder the ideas are, the better. No negative comments, criticisms, or evaluations are allowed—just ideas.

After brainstorming the facilitator helps the group sort down (see Table 5). This involves deciding which of the brainstormed ideas merit serious consideration. The facilitator gives each member input as the group progresses toward a decision and enables each member to see the process clearly as it unfolds. To reach a final decision, the group may use gaining consensus.

Consensus involves enabling a group to reach a decision that all can accept. Tell what the options are, after brainstorming, or when the solutions have been sorted down to a couple of options. If there is disagreement, then ask each group member to share his or her thoughts, ideas, or feelings, or simply invite comments from the group. If the group reaches impasse, then try one of the ideas for a while, then evaluate it, or come up with a compromise. Avoid pressuring individuals into a solution with which they're not comfortable. The major implementors of the solution typically are the parents and teachers. They must be comfortable with the final solution.

TECHNIQUES TO AVOID IN LEADING GROUPS

The following techniques get in the way of group leaders' and members' effective communication and group growth: (a) ordering, directing, commanding; (b) warning, admonishing, threatening; (c) exhorting, preaching, moralizing; (d) giving solutions; (e) judging, criticizing, blaming; (f) name calling, ridiculing, shaming; and (g) interpreting, diagnosing, psychoanalyzing. Guard against them and be on the alert for them in other group members. Most people have used these techniques before, and it is easy to slip into using them again, especially in tense situations or when not feeling confident.

The group process skills described here are critical to effective systematic decision-making processes of team problem solving for interventions. Many school psychologists have developed some basic process skills through education and experience in counseling. If so, they will have little difficulty generalizing their use to team problem solving meetings and learning additional process skills.

SUMMARY

Many team members experience frustration, feelings of inadequacy, and failure in their attempts to change group processes from focusing on diagnosis and placement to focusing on general education interventions. School psychologists have an important role to play in helping teams develop processes that facilitate the transition. To assume the role, many school psychologists need to develop various competencies themselves. A place to begin is refining one's team structure and process skills. Effective structure and process have the power to facilitate group cohesiveness, encourage participation, and improve communication when attempting to transform the tasks and goals of team meetings.

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This text offers practitioner-friendly, step-by-step guidance in conducting behavioral consultation.

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This text provides a model for systems-level teams that consist of 10–14 members representing broad participation. An example of systems-level team problem solving is working with math teachers on curriculum and instruction issues that may be contributing to a high number of referrals of students experiencing failure in math.

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Best Practices in Using Curriculum-Based Measurement in a Problem-Solving Model

Mark R. Shinn
University of Oregon

OVERVIEW

Curriculum-Based Measurement (CBM) is a set of standardized and validated short duration tests that are used by special education and general education teachers for the purpose of evaluating the effects of their instructional programs (Deno, 1985, 1986; Fuchs & Deno, 1991)in the basic skills of reading, mathematics computation, spelling, and written expression (Deno, 1985, 1986, 1989; Shinn, 1989b, 1998). CBM is not a tool to be used on a daily basis by school psychologists as part of their assessment activities.

In an earlier edition of *Best Practices* (Thomas & Grimes, 1995) I asked this question: Given that the principal use of CBM is by teachers to assess student achievement outcomes on an ongoing basis, a logical question arises. Why should *school psychologists* be interested in CBM?

At that time I offered reasons that were divided into two broad categories: concerns about (a) programs and services for students with disabilities and (b) the educational and psychological needs of *all* children. These concerns have not only not diminished, their importance has increased in visibility in educational practice, policy, and law. This chapter provides a rationale for why school psychologists and other educators should be interested in the use of CBM, especially within a particular decision-making model, Problem Solving (Deno, 1989, 1995). The chapter concludes with an example of how CBM is used in Problem Solving via a case study.

Special Education Concerns

In my Best Practices III chapter, I saw three major concerns related to school psychology practice that served as compelling reasons why school psychologists should be interested in CBM and its use in a Problem-Solving model: (a) ineffective special education programs, (b) the lack of quality Individual Education Plan (IEP) goals and objectives, and (c) the misalignment of assessment and intervention. I see these issues as highly related, beginning with the last and working backward. Briefly, because prevailing special education assessment practice generates information that may be useful for eligibility, but that is not instructionally relevant for writing quality goals, poor IEP goals are written. Because poor (e.g., hard to measure, of limited instructional utility) IEP goals are written, progress is not monitored systematically by teachers. Consequently, ineffective interventions are not modified resulting in lower than expected achievement by students with disabilities.

LACK OF SPECIAL EDUCATION EFFECTIVENESS

School psychologists have had a long-standing concern about the effectiveness of special education. More than a decade ago, a survey by Reschly, Genshaft, and Binder (1987) provided evidence of a striking discrepancy between the major activity of school psychologists, testing students for special education eligibility (Hutton, Dubes, & Muir, 1992; Smith, 1984), and their feelings about a lack of positive outcomes generated by these services. Only about one-third (32%) of responding practitioners agreed with the statement that special education services are usually "quite effective."

These professional opinions are echoed by every meta-analysis of special education effectiveness since 1980 (Carlberg & Kavale, 1980; Forness & Kavale, 1987; Kavale & Forness, 1985, 1987). Most recently, Kavale and Forness (1999) stated that

> Most (special education interventions) revealed an ES (effect size) below .5 and thus represent less advantage than one-half year's worth of schooling.... The special education interventions demonstrated effects that primarily ranged from negligible to small, and at best, *medium* (their emphasis) (p. 1003).

Results from meta-analyses are echoed in concerns from major national task forces such as the National Agenda to Improve Outcomes for Persons with Disabilities (U.S. Department of Education, 1994) and individual studies of special education practices. For example, Vaughn, Moody, and Schumm (1998), in a powerful study entitled "Broken promises: Reading instruction in the resource room," confirmed what many earlier studies had documented: that special education instruction was not notably different from that delivered in general education classrooms. Vaughn et al. (1998) reported teachers in special education using the same grouping practices and instructional materials as their general education counterparts and "provided little differentiated instruction" (p. 221).

IEP GOALS AND OBJECTIVES

Another concern tied to the lack of special education outcomes is the quality of special education students' IEP goals and objectives. Without quality goals and objectives, evaluation of individual student's outcomes is problematic, and, as a result, ineffective interventions will not be identified and modified. Special education legislation (e.g., the Individual Disabilities Education Act) has long recognized the needs for evaluation of individual program outcomes and mandated that each student with a disability have a statement as to what the special education intervention is designed to accomplish on at least an annual basis. However, nearly two decades after implementation of the original Education for All Handicapped Children's Act (1975), the quality of IEPs has not improved significantly (Bateman & Linden, 1998; Smith, 1990). For more detail, see Shinn and Shinn (2000).

Typically, IEP goals are written without current student performance data, are vague and lack observable, measurable outcomes (e.g., "Will improve 1 year in reading"), or present lists of isolated short-term instructional objectives (e.g., will master C-V-C words with 80% accuracy). Compounding the problem of difficult-to-measure goals is the lack of consensus as to what student goals should be. Too often, special education goals are procedurally driven (e.g., dictated by "district policy") as opposed to a meaningful discussion as to what an individual's special education program is designed to accomplish.

LINKING ASSESSMENT AND INTERVENTION

The third major special education concern for school psychologists is the lack of treatment validity of their assessment data. Information collected most often comes from published norm-referenced tests of aptitude and achievement (PNTs). Extensive discussion as to the limited treatment utility of PNTs is beyond the scope of this chapter. The reader is encouraged to see Marston (1989) or Howell and Nolet (1999) for a more extensive discussion of this topic. In brief, although many PNTs are well constructed as *global* measures of general abilities (e.g., reading), the very nature of their broad-band content precludes their usefulness for goal setting and intervention planning. The tests' limited number of items are spread across too large an age span and too few are tied to specific curriculum. These problems lead to questionable conclusions about what a student does or does not do correctly and what a student needs to learn to be successful in a *specific* general classroom curriculum. Additionally, PNTs rely almost exclusively on selection-type response formats (e.g., pointing to one of four choices) that are not "authentic." These types of responses provide information only on correctness, not on what strategies or preskills a student brings to bear on a task (Howell & Nolet, 1999).

Remedies in IDEA 97 and the Linkage to CBM to Redress These Concerns

As discussed in more detail in Shinn and Shinn (2000), Congress set forth to remedy these three

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issues, among others, in the revision of the Individuals with Disabilities Education Act of 1997 (IDEA 97). Explicitly stated within the revision was the need to (a) assess educational need; (b) write measurable annual IEP goals, monitor progress, and report progress to parents at least as often as progress is reported about non-disabled students; and (c) make revisions in the IEP to address any unexpected lack of progress. The critical component in each of the explicit statements is the need to make these decisions and actions in the context of participation and progress in *general curriculum*.

The ability of CBM to help accomplish the intents of IDEA 97 is one of the reasons that it should be of interest to school psychologists and educators alike. The use of CBM is advantageous in that the source of its testing materials is general curriculum. The linkage from what is tested to determine educational need and special education eligibility to IEP goal setting and progress monitoring and IEP revision is direct and requires fewer inferences than conventional assessment practices. CBM measures are "narrow band" in general curriculum test content as its test items typically encompass only 1 year of a curriculum for each level of the test. *All* items are derived from the curriculum used in general education classrooms, and thus maximize testing/teaching overlap. Finally, CBM relies on production-type, authentic response modes. Students read aloud from text, write dictated spelling words, write answers to mathematics computational problems, and write stories. These types of responses allow information to be gained not only about correctness, but *how* and *why* students answered in specific ways.

A clear advantage of using CBM with students with disabilities is that it is a technology that has been *validated* for use in writing observable and measurable IEP goals and making statements about progress in general curriculum (Fuchs & Shinn, 1989; Shinn & Shinn, 2000). In fact, CBM's research-based development was supported by federal funds to identify a technology to assist in implementation of the original Education for All Handicapped Children Act, P.L. 94-142 (1975). For more detail on this history, see Deno (1992) or Shinn and Bamonto (1998).

When CBM is used to write IEP annual goals in general curriculum, students with disabilities' achievement outcomes improve. Numerous studies by L. Fuchs and D. Fuchs (e.g., Fuchs, 1998; Fuchs, Deno, & Mirkin, 1984; Fuchs, Fuchs, & Hamlett, 1989; Fuchs, Fuchs, Hamlett, & Allinder, 1991; Fuchs, Fuchs, Hamlett, & Ferguson, 1992; Fuchs, Fuchs, Hamlett, & Stecker, 1991) have shown that when teachers use CBM to write data-based goals, monitor the effects of their instructional programs, and adjust their interventions when the data show little outcome, student achievement improves. Typical effect sizes, the amount of standard deviation gains in achievement attained by members of the treatment group versus controls, exceed .5 (Shinn & Hubbard, 1992). Because school psychologists are concerned about the limited or negligible effects of special education and use of CBM is not only consistent with the changes required by IDEA 97 but also improves achievement outcomes, they should be interested in implementing CBM.

Educational Needs of All Children

School psychologists are becoming increasingly aware of the need for *prevention* as a major practice activity. However, they remain burdened by their heavy time commitment to testing for special education eligibility. CBM can help school psychologists contribute to meeting the needs of *all* children directly and indirectly (Tilly & Grimes, 1998).

Direct contributions of CBM are evidenced by reducing the need for school psychologists' mandatory and extensive participation in special education eligibility testing. When CBM is implemented in a Problem-Solving model, school psychology testing for special education eligibility is reduced significantly and corresponding increases in intervention services to all children are noted. Such changes were reported by Canter (1991) in Minneapolis Public Schools and as part of statewide special education reform in Iowa (Tilly & Grimes, 1998). Rather than routinely testing every referral for purposes of determining special education eligibility, when CBM is used in a Problem-Solving model, school psychologists test students only when there are specific assessment questions. Because special education services are provided when educational need is demonstrated and initial problem-solving interventions fail, the use of ability tests is reduced or eliminated. For more detail, see Tilly, Reschly, and Grimes (1999).

With a decrease in eligibility testing, increases in school psychologists' intervention activities are observed. For example, in Minneapolis, consultation to general education and special education teachers increased from 12% to 36% of cases within 3 years; within 5 years, this figure increased further to 52% of cases (Canter, 1991). Similar changes in the intervention activities of school psychologists are noted in the Heartland Area Education Agency in Iowa (Ikdea et al., in press).

Indirect contributions of CBM occur when it is used in general education classrooms as part of standard promotion and prevention practices. This use is increasing in occurrence where general education teachers administer CBM probes to all students at the beginning of the year as part of an initial assessment. This information is used to identify at-risk students for immediate problem-solving activities rather than waiting for problems to intensify. General education teachers also use this information for instructional planning, including evaluating text difficulty and instructional grouping, and as an initial data point for evaluating progress. All students subsequently are retested by using either (a) a *Benchmark Testing* approach where progress is evaluated quarterly or every trimester or (b) a *Strategic Monitoring* approach where progress is evaluated monthly. This proactive use of CBM allows school psychologists to be active in assisting general education design environments that result in positive outcomes. For example, should the progress of large numbers of students be insufficient, school psychologists may contribute to decisions about curriculum choices. This proactive use also creates opportunities for school psychologists to be involved in general education problem-solving and instructional-planning decisions with individual students. For more information on the use of CBM in promotion and prevention in general education classrooms, see Shinn, Shinn, Hamilton, and Clarke (in press).

BASIC CONSIDERATIONS

Given these compelling reasons for school psychologists to be interested in CBM, then the question becomes, *Just what is CBM?* This question is important to answer because practitioners have encountered a virtual explosion of information in the professional literature on a wide range of testing strategies that collectively can be called *curriculum-based assessment* (CBA). Among the numerous assessment techniques considered CBA are informal reading inventories, end-of-unit mastery tests, analysis of homework samples, performance assessments, precision teaching, and a variety of locally made tests that measure what students are learning. To reduce confusion, it is important for practitioners to discriminate the similarities and differences among the variety of approaches collectively entitled CBA. For more information on this topic, the reader is referred to Shinn, Rosenfield, and Knutson (1989), Shinn and Bamonto (1998), or Tindal (1993).

In brief, CBA is a very broad term that describes *any* testing strategy that uses a student's curriculum as the basis for decision making. CBM is a particular *type* of CBA. Testing is accomplished by using a limited number of standardized and validated measures of student performance in the basic skill areas of reading, spelling, mathematics computation, and written expression. Specifically, CBM measures consist of the following core testing strategies:

1. In reading, students read aloud from basal readers for 1 minute. The number of words read correctly constitutes the basic decision-making metric. Maze, a multiple choice cloze reading technique, also has been validated as a CBM testing strategy (Fuchs & Fuchs, 1992). The number of correct word choices per 5 minutes is the primary metric.

2. In spelling, students write words that are dictated at specified intervals (either 5, 7, or 10 seconds) for 2 minutes. The number of correct letters sequences and words spelled correctly are counted.

3. In written expression, students write a story for 3 minutes after being given a story starter (e.g., "Pretend you are playing on the playground and a spaceship lands. A little green person comes out and calls your name and..."). The number of words written, spelled correctly, and/or correct word sequences is counted.

4. In mathematics computation, students write answers to computational problems via 2- to 5-minute probes. The number of correctly written digits is counted.

Upon first inspection, CBM looks like a number of other CBA approaches. For example, when reading is tested, students read connected text aloud in CBM, a process that looks much like an informal reading inventory (IRI). Similarly, students typically read aloud for 1 minute, a process that resembles Precision Teaching (White & Haring, 1981). However, these similarities should not preclude a careful analysis of how CBM is different from other CBA approaches. CBM differs from other CBA approaches on a number of important features. Among its most important features is an emphasis on *standardization*. The technical adequacy of CBM in decision making is demonstrated through specifying carefully the measurement conditions, including directions, scoring, choices of testing material, and interpretation standards. CBM is not an informal (i.e., "anything goes") set of testing activities. As with any standardized test, significant deviation from the standard procedures means that the conclusions drawn from the tests may not be valid.

The more obvious features of CBM, and ones that typically generate considerable discussion among professionals, are that the tests are (a) short (i.e., 1–5 minutes) and (b) emphasize fluency, a combination of accuracy and speed, as the behaviors of interest.

CBM as DIBS

Why would a testing strategy place so much emphasis on a small number of short tests that emphasize fluency? This contrast in testing approaches is very different from most educational testing practices that emphasize long tests with a varied behavior sample that is scored typically in terms of the number correct.

The best way to understand CBM is to characterize CBM as a set of *DIBS*, or dynamic indicators of basic skills. CBM is *dynamic* in that the measures are designed to be sensitive to the short-term effects (i.e., 4–6 weeks) of instructional interventions; they are designed to assess *change*. By using short tests, they can be administered frequently, even weekly, to allow learning to be assessed on a routine basis.

The choice of *fluency* of performance in reading, spelling, written expression, and mathematics computation as the behavior of interest was the result of an ongoing program of research that demonstrated its usefulness in making problem-solving decisions. Beginning in 1978, an extensive program of federally funded research was undertaken to identify key behaviors that would meet the technical requirements to serve as simple, but general, measures of academic performance. Although a considerable body of information has been published on the technical adequacy of CBM in all four academic areas, most research has been conducted on CBM reading measures. See Marston (1989) and Good and Jefferson (1998) for extensive summaries. Results suggest that for most elementary-aged students, counting the number of words a student reads aloud correctly from connected text in 1 minute works extremely well as an indicator of general reading proficiency, including comprehension. Evidence has been garnered with respect to construct validity (Shinn, Good, Knutson, Tilly, & Collins, 1992) as well as traditional conceptions of criterion-related validity, including correlations with other accepted published measures (e.g., Deno, Mirkin, & Chiang, 1982; Fuchs, Fuchs, & Maxwell, 1988) and teacher ratings (Fuchs, Fuchs, & Deno, 1982).

The "I" in DIBS represents that the measures are designed to serve as *indicators* in that they were validated to be correlates of key behaviors indicative of overall performance in an academic area. The CBM measures were *not* designed to represent *all* behaviors that may be included in an academic domain such as reading. For example, Reading-CBM will not provide direct information about whether a student can separate fact from fiction, or identify how compelling is an author's argument. Using CBM also does not mean that they are the *only* tests used to assess students' educational needs. For example, should a teacher be interested in a student's fact versus fiction skills, a measure that assesses this specific skill would be appropriate.

I believe the best metaphor to help understand the use of CBM is to think of the CBM measures as educational thermometers. A thermometer assists the medical community in making a number of general, but key health decisions :

1. Inform whether there is a health problem that warrants further investigation (e.g., a temperature of 101.5° F).

2. Determining the severity of the health problem (101.5° F versus 104° F).

3. Setting goals for a medical intervention (return to 98.6° F with treatment).

4. Evaluating whether the treatment is effective (a reduced temperature to 100.3° after aspirin).

5. When a medical problem is no longer severe (temperature is back within the normal range).

When CBM is used in a Problem-Solving model, its use as an indicator allows for decisions like these made with a thermometer in medicine. Of note also is that like medical thermometers, CBM was not designed to be prescriptive. As with a thermometer that does not inform a physician whether the cause of a high fever is a bacterial or viral infection, or the result of appendicitis, CBM typically does not tell "why" a person has an academic performance discrepancy or how to intervene to reduce it.

The last important distinction to be made about the CBM measures themselves are that in the acronym DIBS, the BS represents the fact that they are designed to quantify student performance in the *basic skills* areas of reading, spelling, mathematics computation, and written expression. They were not designed to draw inferences about a student's skill in content area courses such as science or health education. Although this basic skills focus may appear limited in scope, it is important to note the importance of basic skills in the development of functional literacy (Adams, 1990) and the fact that nearly all students in special education are referred because of severe deficits in these areas.

In sum, CBM's short but repeatable measures from general curriculum were designed to fill a void in educational measurement, especially for students with severe educational needs. They were designed as DIBS to give educators a simple, straightforward way of determining the status of students' "educational health" in critical academic areas, and to provide a mechanism for evaluating the effects of efforts to improve any given student's academic health.

CBM and a Tie to a Problem-Solving Model

CBM can be set apart from other CBA models in that it is tied to an explicit decision-making model (Deno, 1995). It was stated in the first sentence of this chapter that CBM typically is used by teachers to evaluate the effects of their instructional programs. However, usually CBM is used to do more than accomplish this important endeavor. CBM implementation usually occurs in conjunction with implementation of a Problem-Solving model (Deno, 1989, 1995), a heuristic that is composed of five major decisions that are presented in Table 1. Each of the Problem-Solving model decisions is associated with more familiar terms in special education decision-making jargon (e.g., Salvia & Ysseldyke, 1998). Problem-Identification and Problem-Certification decisions, for example, could be considered to be the equivalents of the traditional processes of screening and eligibility determination, respectively. Exploring Solutions could be considered synonymous with instructional planning. With special education students, this process corresponds to the development of an IEP, including setting annual goals and determining intervention plan content and process. Evaluating Solutions relates to pupil progress monitoring while Problem Solution is analogous to program termination or changes in placement to less restrictive settings.

Rather than broad-based, undifferentiated data gathering activities and subsequent decision making, the Problem-Solving model dictates that *specific* information is collected for each step. The need for additional assessment information is decided on a sequential basis. Sometimes assessment activities stop after the first decision (i.e., Problem Identification) should a problem not be validated. Other times, assessment and decision making may occur on a repeated basis throughout a student's educational career spanning years. How CBM is used in the Problem-Solving model will be detailed later in the chapter.

A Problem-Solving model is more than just a set of specified, sequenced decisions (i.e., what is done first, then second, etc.). It is inseparably linked to some foundational assumptions as set forth by Deno (1989, 1995). The Problem-Solving model is predicated on three core assumptions. First, a problem is defined *situationally* as a discrepancy between *what is expected* and *what occurs*. In an academic context, a problem exists when a student does not perform the academic behavior(s) that is expected of him or her in a particular curriculum in a particular classroom, school, school district, or state. The implication of this definition is that "problems" may not be solely the student's "internal problem." What is a problem in one context may not be a problem in another context. Consider the case of two third-grade students, Amy and Billy. Their classroom

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Table 1. CBM problem-solving model decisions, measurement activities, and evaluation activities

Problem-solving decision	Measurement activities	Evaluation activities	Specific tasks
Problem identification	Observe and record student differences, if any, between actual and expected performance	Decide that a performance discrepancy exists	Peer-referenced assessment
Problem certification	Describe the magnitude of differences between actual and expected performance in the context of likelihood of general education alone solving the problem	Decide if discrepancies are important enough that special services may be required for problem resolution	SLA and identification of alternative intervention options
Exploring solutions	Determine options for annual goals	Decide on annual goal(s) and actual content of intervention to be implemented	Write annual goal based on SLA; identify specific skill or strategy deficits
Evaluating solutions	Monitor intervention implementation and changes in student performance	Determine if intervention is effective or should be modified	Collect progress monitoring data and compare with aimline
Problem solution	Observe and record student differences, if any, between actual and expected performance	Decide if current discrepancies, if any, are not enough and special services may be reduced or eliminated	Repeat peer-referenced assessment and SLA

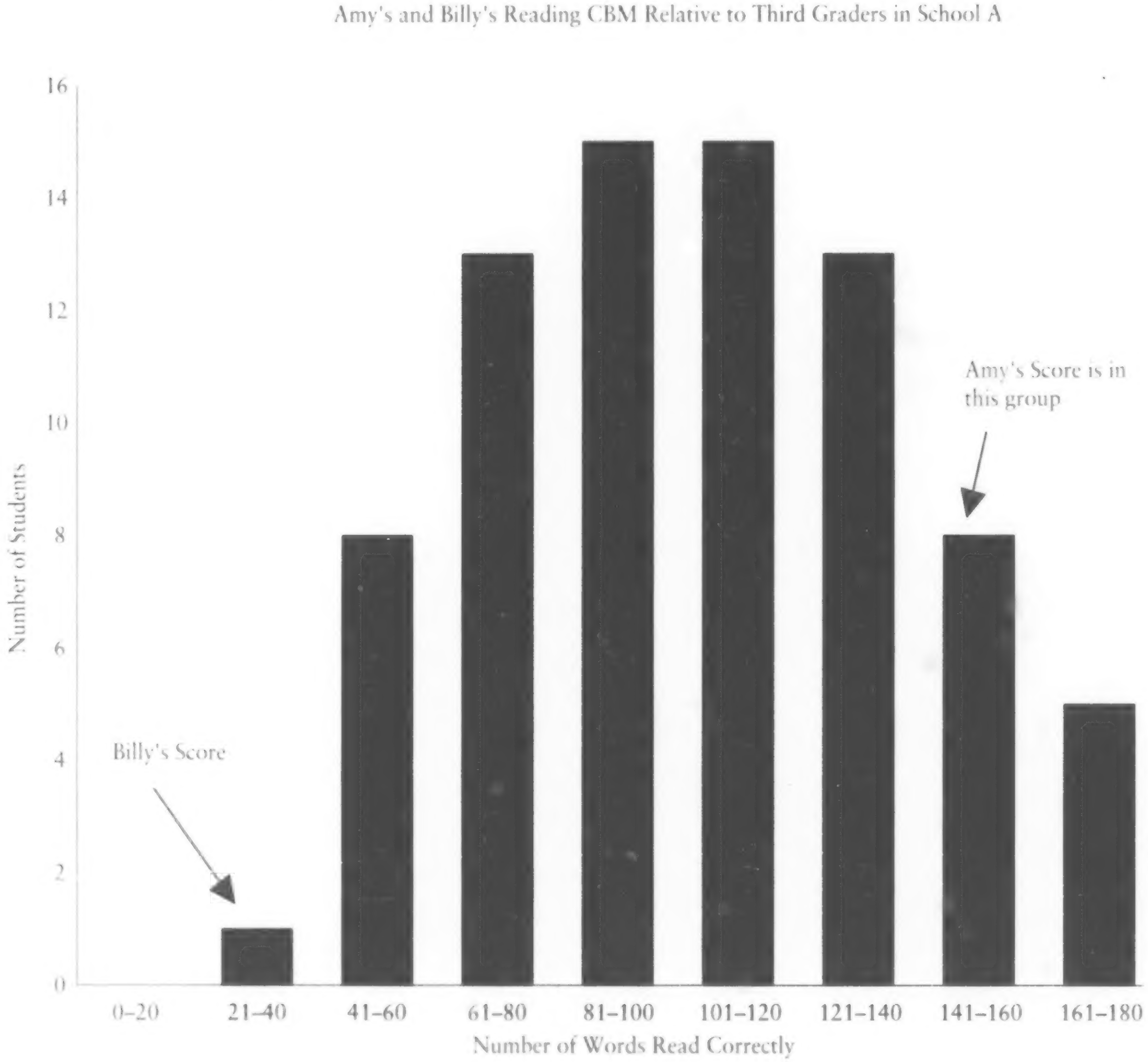
teacher would *expect* them to perform in the third-grade reading curriculum like other students in the classroom. The degree to which they vary from this achievement expectation may result in their reading being viewed as a problem.

With CBM, it is possible to use a data-based decision-making process to describe Amy's and Billy's reading skills and to determine whether there is a problem in a specific environment. Because the CBM measures are dynamic indicators and are of short duration, it is possible to describe the general achievement expectations in particular settings in a time efficient manner by developing local norms. For more information on this process, see Habedank (1995, this volume) or Shinn (1998). In Figure 1, Amy's and Billy's reading skills relative to the achievement expectations in two school systems are compared. The foundation for the frequency distributions displayed in the figure is the result of having all third graders in the two school systems, including Amy and Billy, read three randomly selected passages from the typical level of the third-grade general education reading curriculum. Each student's median score is used for summary purposes. Imagine that Amy's and Billy's median scores on the third-grade reading passages were 141 words read correctly for Amy and 39 words read correctly for Billy.

As displayed in Figure 1, reading skills in the third-grade general curriculum in School A are distributed normally. Relative to these third graders, Amy is in the top quarter of the group in reading skills. Billy, however, is clearly the lowest performing reader. In this situation, although Amy's instructional needs may be similar to a number of other students, Billy may be considered as having a serious reading problem that may require accommodation through problem solving for him to be successful.

In School B, the general curriculum reading skills are not distributed in the same way as School A. The distribution is positively skewed, and a substantial proportion of students are reading very poorly in their third-grade general curriculum. Therefore, problems may be defined differently. Amy, for example, is now the best third-grade reader, and her skills may be so different from others that special accommodations through problem solving may be necessary to meet her instructional needs. Billy is no longer easily identifiable as having a reading skill discrepancy. Out of 52 third-grade pupils, Billy reads as well or better than one-third (17) of the group. It would

Figure 1. A comparison of two students' scores relative to two different environments



be most unlikely that Billy's general education teacher would consider him to have a reading problem that requires some attempts at problem solving in this context. Instead, the data suggest that larger scale *general education problem solving* should be undertaken to meet the educational needs of more students.

In addition to a principle that problems are defined *situationally* as the discrepancy between what is expected and what occurs, the Problem-Solving model assumes that within specific environments, there is a subset of students whose discrepancies are so significant that it may be unreasonable for them to achieve in general education unless their programs are modified (for more detail, see Deno, 1989, 1995, this volume). Currently, it remains a "value judgment" as to when the discrepancy is so severe that special services are warranted, despite repeated attempts to make it quantifiable by using a battery of tests and regression formulas. That is, the exact criterion each state uses for each disability category are specified not by a scientific criterion but by codified judgments. For more detail, see Shinn, Good, and

Parker (1999). By using CBM in a Problem-Solving model with local norms helps decision makers not only operationalize discrepancies, but also to determine whether additional resources such as special education *are needed* to help students benefit from their general education. For example, in School A, Billy has a reading discrepancy that *may* require additional resources. In School B, the educational need (i.e., the performance discrepancy) is not apparent, although it could be argued that significant numbers of third graders in this school need a change in their reading program because so many third-graders are reading so poorly.

The final assumption of the Problem-Solving model is that effective educators must "generate many possible plans of action prior to attempting problem solution" (Deno, 1989, p. 11) and evaluate the effects of the program actually implemented. Presently, we lack the assessment technology to say with certainty what instructional program will work with any student. We cannot say that Billy will benefit from special education (or peer tutoring) in School A *before* we try it out. Therefore, we need to treat all of our interventions as testable hypotheses that must be evaluated formatively for each individual student. Interventions that show strong positive effects when they are evaluated are maintained; ineffective interventions are discarded and/or modified.

BEST PRACTICES

The core CBM test strategies are varied systematically and combined with other pieces of information to make one of five decisions in the Problem-Solving model. Depending on the decision to be made, for example, a student may be tested in different *levels* of a curriculum. For example, when making Problem Identification decisions, a student for whom there is a concern (e.g., a third grader) is tested in the level of the general education curriculum (i.e., third grade) that the typical same-grade peer would be expected to perform satisfactorily in. In contrast, when making Evaluating Solutions decisions, a student is tested on curricular materials that correspond to the level of the curriculum he or she would be expected to perform in 1 year (i.e., the instructional material that represents the annual goal of the IEP).

In addition to systematic differences in the level of the curriculum tested as a function of the decision to be made, the decision-making standards vary as well. One of two approaches is employed: *norm- or peer-referenced* and *individually referenced* decisions. Some decisions in the Problem-Solving model (e.g., Problem Identification) use a norm- or peer-referenced approach. Decisions are made by comparing an individual student's test results to that of a local norm group. This local norm could represent students from the same class, same school, or same school district. For other decisions (e.g., Evaluating Solutions), an *individually referenced approach* is used. The standard is not how a student's performance compares to a group, but how that student's performance compares to his or her previous and expected performances.

Problem Identification

The first step of the Problem-Solving model is Problem Identification. The goal of Problem Identification is to determine in a systematic way if an academic problem exists that is important enough to warrant further assessment (Shinn & Hubbard, 1992). As presented in Table 1, the Problem-Identification process requires a data-based decision about whether a student's performance on academically important tasks (i.e., curriculum tasks) is *significantly discrepant* from that of same-grade peers. For example, in the case of Billy illustrated in Figure 1, at what point is his reading performance relative to other students considered so discrepant that it would be validated as a problem? In School A, his performance is the lowest of third graders, but is it *significantly* different? In School B, his performance was more like those of other students. How much like the other students did he perform? Problem Identification attempts to provide some quantification of the differences in curriculum performance to facilitate decision making.

Problem Identification begins like other school practices when someone, usually a general education teacher or a parent, considers a student's skills to be a concern. This concern usually translates into a referral. However, in contrast to prevailing practices where "referral" is synonymous with *special education* referral and special education eligibility testing, in a Problem-Solving model referrals are made to a *general education* Problem-Solving team (PST). After collecting relevant information on student academic performance using CBM and school and medical history, the PST decides if a problem is validated and is one that may require more extensive problem-solving efforts in the students general education program (e.g., curriculum changes, changes in instructional strategies, Title I) to be resolved. Only if a serious problem were validated that required resources beyond general education alone would more intensive assessment activities such as determining special education eligibility be considered.

This Problem Identification process has a number of advantages over standard practice. The first is one of philosophical approach. From the beginning of the process, not *every* potential problem is viewed as a special education problem. Problem-solving attempts begin with general education interventions. Referrals that are not validated as potentially significant problems may be resolved with general education problem solving and may not require special education at all. Some referral concerns may be remedied based on interventions in general education classrooms identified by the PST. The kind of data collected for Problem Identification is very useful for intervention planning in general education classrooms. The second advantage is that Problem Identification allows for a systematic and timely verification of teacher or parent referral accuracy without the need for special education due process procedures. Although teachers have been demonstrated to be highly accurate in identifying potential student achievement difficulties (Gerber & Semmel, 1984), they also have been shown to be susceptible to gender and ethnicity biases (Shinn, Tindal, & Spira,1987). When there is a significant discrepancy, teacher perceptions of a problem are validated objectively. Parent referrals usually result in expensive assessment practices and lower rates of special education eligibility determination than teachers. By systematically collecting Problem Identification information, the appropriateness of parental concerns can be examined objectively, without expensive special education testing. The third advantage is that the systematic Problem-Identification process can reduce over-testing, an expenditure of limited resources such as school psychologists' and other specialists' time. Those students for whom a problem is not identified are not tested. Terminating testing at this point frees up the persons who normally would collect eligibility information to help general education teachers address the student needs in the classroom.

In operation, Problem Identification relies on a norm- or peer-referenced approach. The referred student's current level of performance in general curriculum is determined by repeated testing over a short period of time in grade-level curriculum materials in the academic area in which the student is considered to be experiencing difficulty. The student's scores then are compared to an expected achievement level and range derived from other general education students. If schools are using CBM in general education promotion and prevention activities, it is very easy to validate problems. *Any* student's CBM scores are compared to those of all the other students and those students with the greatest educational needs (i.e., the largest performance discrepancy) are considered for problem solving.

If schools are not using CBM in general education promotion and prevention activities, then local norms must be developed for Problem Solving. Depending on the degree of school system commitment to a Problem-Solving model, local norms can be derived from students in the same classroom, building, or district. See Habedank Stewart (this volume) for more information on this topic. The discrepancy between the student's actual and expected performance (i.e., the achievement level of typical peers) is calculated and a decision regarding the need for further assessment is made via a cutting score.

A critical feature of Problem Identification is that *repeated* samples of the student of concern's current performance are collected over a period of 3–5 days. Repeated samples provide information about the variability of the student's performance, reduce the effects of "good" days and "bad" days, increase examiner familiarity effects, and allow for a broader sample of academic behavior for intervention planning and reliable decision making.

For illustration of the Problem Identification procedures, consider the case of Sara, who was referred to a PST by her general education teacher during the Fall quarter of third grade because of concerns about her progress in reading and spelling. Because the PST found no obvious reasons for the teacher's concerns (e.g., poor school attendance, vision or hearing difficulties), Sara was tested by a trained member of the PST using a series of third-grade level CBM probes derived from the general education reading curriculum and spelling curriculum. The levels of the reading and spelling curricula were the levels in which the typical third grader was expected to perform. In reading, there were two levels of third-grade readers; typical students were expected to be reading in level 3-2. The PST member had Sara read three different randomly selected passages from level 3-2 for 1 minute, each day for 5 days. The number of words read correctly and errors are recorded, although, for simplification, errors are eliminated in this case study. Sara's reading scores were summarized daily using the median of the three passages.

In spelling, there was only one level of the spelling series. Sara completed a different 2-minute CBM spelling probe with words drawn randomly from all the words in the third-grade spelling book on each of the 5 days. The number of words spelled correctly and in correct letter sequences, a precise measure of spelling skills, is recorded. For illustration, only correct letter sequence scores will be used. Sara's reading and spelling scores are displayed in Table 2. Table 2 also includes third-grade school norms, based on the median reading and spelling scores of 20 randomly selected third-grade students who had been tested using the same materials as part of a school norming process.

To facilitate decision making and increase communication, Sara's scores are displayed in a graph as shown in Figure 2. This figure shows Sara's daily median scores in reading and spelling as well as the median performance of other third-grade students in her school. The peer median is represented by the heavy solid line. To decide if a significant discrepancy exists, Sara's scores must consistently fall below a critical value or cutting score, which is represented in Figure 2 by the double line. In this example, the cutting score was based on a *discrepancy ratio* that is calculated by dividing the peer median score by the referred median student's score. Sara's reading discrepancy score was 3.7. The third-grade peer median of 100 words read correctly was divided by Sara's median score of 27 words read correctly. Her discrepancy ratio was 2.3 (123 correct letter sequences/53 correct letter sequences) in spelling. The most common discrepancy ratio that is used as a cutting score is equal to or greater than 2.0. This score indicates that a student performs at half the fluency (or less) of the typical student in a skill domain. A discrepancy ratio of this magnitude is sufficient to decide that a problem may exist that warrants further assessment.

Discrepancy ratios are used most commonly when local norms are developed for classrooms or schools. When district norms are created, a team has the advantage of percentile ranks, used more conventionally in decision making. Cutting scores based on percentile ranks are determined by finding the raw score that corresponds to an agreed-upon critical level (e.g., 7th or 10th percentile). When a referred student's scores consistently fall below the value of scores at the critical level, a problem is identified. If no obvious explanations exist to account for the discrepancy, then the student may be assessed further in more detail. In the case of Sara, her median scores were converted to percentile ranks and compared to the rankings of her third-grade peers from her school district. In reading, her scores fell below the 2nd percentile; in spelling, her scores were at the 5th percentile compared to the school district's third graders.

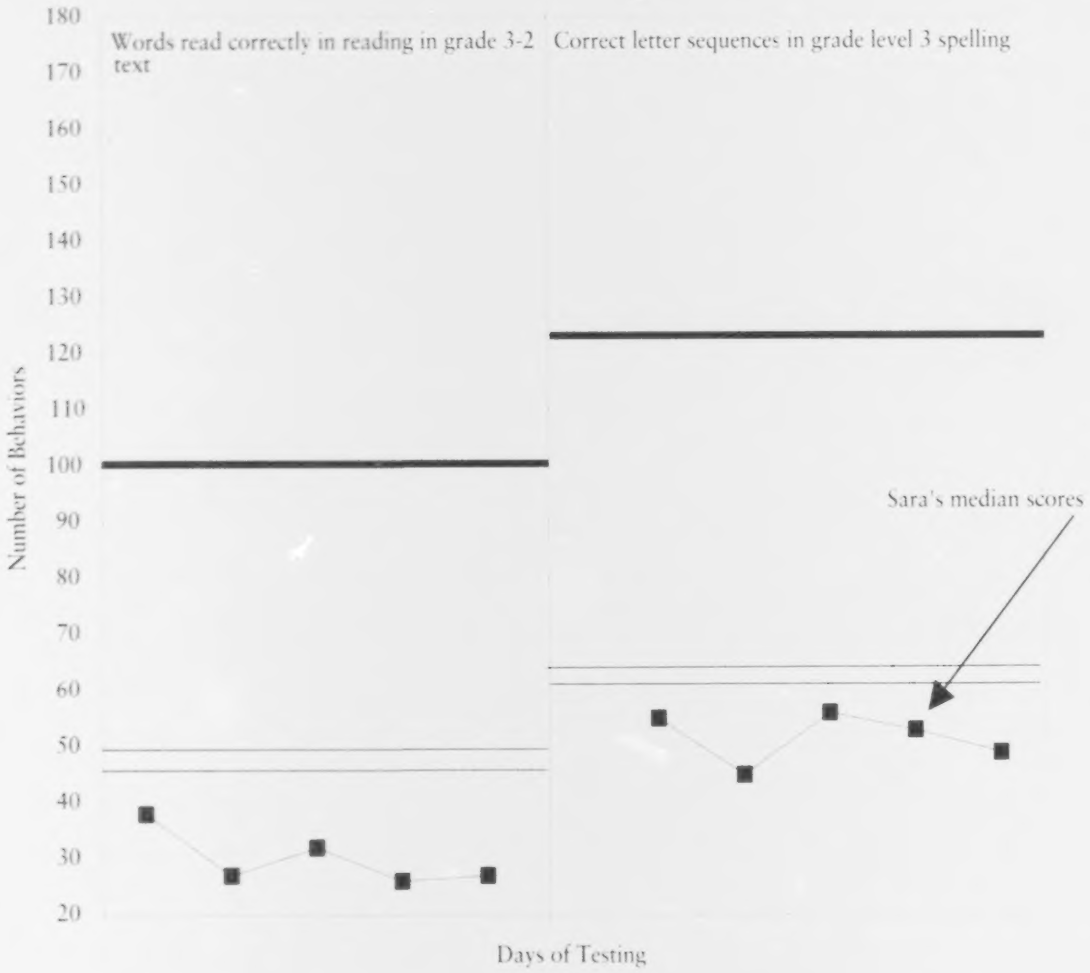
Sara's Problem Identification data consistently were below the discrepancy ratio cutting scores in

Table 2. Results of CBM problem identification testing for Sara

Academic area tested	*Day 1*	*Day 2*	*Day 3*	*Day 4*	*Day 5*	*Overall median*	*Peer median*
Reading grade 3-2 passages							
WRC passage 1	35	16	32	26	29		
WRC passage 2	40	27	42	38	24		
WRC passage 3	38	33	30	24	27		
WRC daily median	38	27	32	26	27	27	100
Spelling grade 3							
Spelling words CLS	55	45	56	53	49	53	123

Note. WRC, words read correctly; CLS, correct letter sequences.

Figure 2. Results of Sara's problem-identification testing in grade 3 reading and spelling probes compared to same-grade peers



reading and spelling. Because the team ruled out educational or medical history as viable explanations for Sara's performance, they decided that further investigation of Sara's reading and spelling skills was warranted. For purposes of illustration, only the results of further assessment in reading will be reported.

Problem Certification

Once a problem is identified, a Problem Certification decision must be made. The major activity is to determine the magnitude or *severity* of the problem. As described in Table 1, Problem Certification is conceptualized as determining whether the difference between actual and expected performance is serious enough that a multi-disciplinary team (MDT) decides that it is unlikely that the academic problem will be resolved with general education resources alone. Once the magnitude of the discrepancy is known and the MDT decides that it is important, the team considers what resources may be available to resolve the problem (e.g., Title 1, peer tutoring, special education). If the MDT decides that the student needs special education to succeed, then eligibility is determined, assuming that procedural state and federal requirements are met (Shinn, Good, & Parker, 1999; Shinn & Hubbard, 1992).

The Problem Certification process begins by conducting a survey-level assessment (SLA) using CBM for each academic area in which a problem has been identified. In SLA, the student is tested in successively lower levels in the curriculum sequence. For example, in Sara's school district's curriculum, there were two levels of third-grade text (3-2, 3-1), two levels of second-grade text (2-2, 2-1), and three levels of first-grade text, exclusive of pre-primers. The data from level 3-2 were obtained already during Problem Identification so there was no need for repeating that testing. Sara was tested using a minimum of three randomly selected passages in each book, beginning with level 3-1 until the level was reached in which she performed successfully. The SLA was completed in one testing session of about 20–30 minutes. The difference between her grade placement and the level of the curriculum in which she could be defined as *successful* would indicate the magnitude of the problem. The results of Sara's SLA are presented in Table 3.

Success can be operationalized in one of two ways: by using normative scores or (b) instructional placement standards. The best way to determine the severity of a problem is to determine the student's *normative score* relative to students with similar acculturation from the same instructional environment (i.e., with local norms). This normative score corresponds to the level of the curriculum in which the tested student's percentile rank score in material from the general curriculum level falls in the average range (i.e., 25th to 75th percentile) of the local norm at that grade. Sara's percentile rank reading scores are included in Table 3. For making Problem Certification decisions, this local norm is based on a sufficient sample size to ensure stable, representative norms. Sara earned reading scores that are clearly outside the average range for students in third and second grade. Sara's score in reading first-grade material was better than most first graders who enter school as non-readers (Shinn, 1988). To facilitate decision making, the SLA information are graphed as shown in Figure 3.

To make Problem Certification decisions, school leaders must establish a percentile rank cutting score below which students can be considered for special education eligibility. See Shinn (1989) or Shinn, Good, and Parker (1999) for more detail on this topic. Sara was declared to be eligible because she performed outside of the average range of students in second-grade who were reading general education second-grade material.

Should local norms not be available, the use of instructional placement standards can contribute to understanding the severity of educational need. Although less precise, these standards can be used to approximate what level of curriculum may be best for purposes of instruction. For example, one standard that has been explored for reading when first- or second-grade levels of the curriculum are considered *and* students are to receive teacher-led instruction is that students are placed in the highest level in which they read between 40 and 60 words correctly per minute. Students also must have high accuracy, about 90–95% or 4–6 errors per minute. For third- through sixth-grade reading curriculum, students are placed in the highest level in which they read between 70 and 100 words correctly per minute. A higher fluency standard is required because of the increased cognitive complexity of the reading materials. Again, it is assumed that the majority of their reading instructional program is teacher directed.

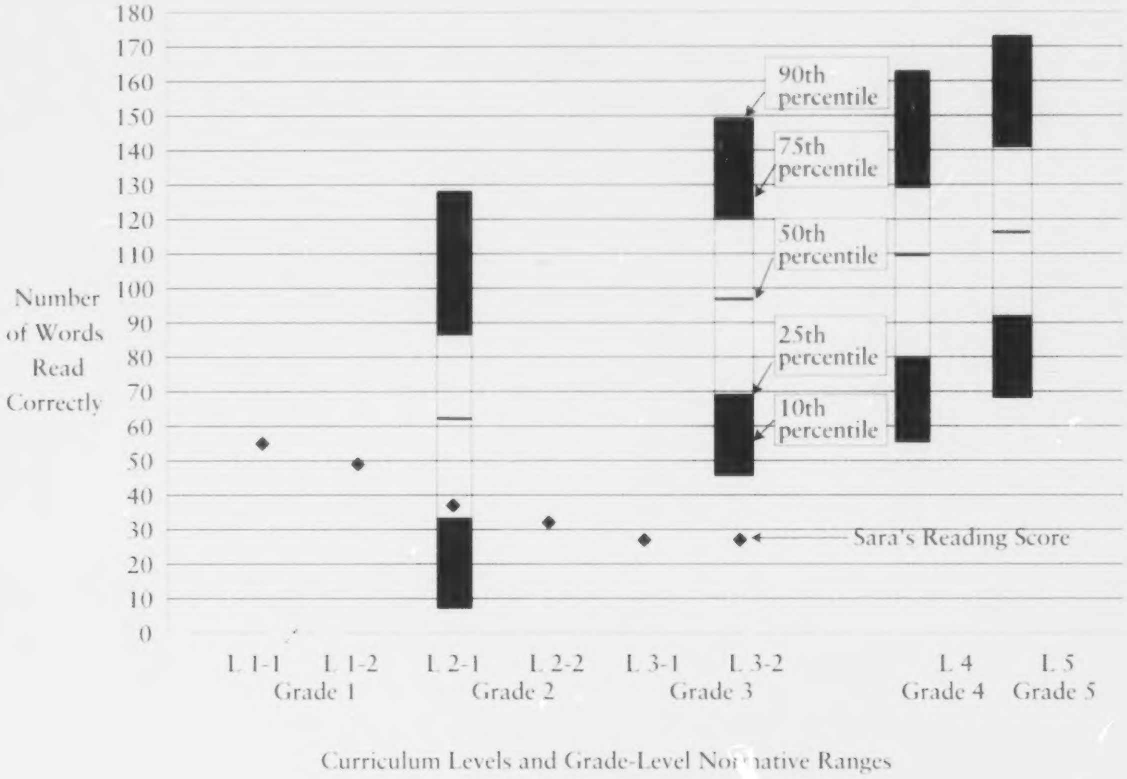
These reading instructional placement standards are represented in Figure 4 to facilitate communica-

Table 3. Reading SLA for Sara with curriculum level and performance relative to local norms

Level of Ginn curriculum	*Sara's median performance*	*Grade-level peer performance*	*Sara's percentile rank*
3-2	27	100	2nd
3-1	27	NA	NA
2-2	32	NA	NA
2-1	37		15th
1-3	49	NA	NA
1-2	55	—[a]	—[a]

[a] No first-grade students were tested in the Fall because most students entered with limited reading skills.

Figure 3. Results of Sara's SLA assessment in reading, comparing her performance to same- and other-grade general education students



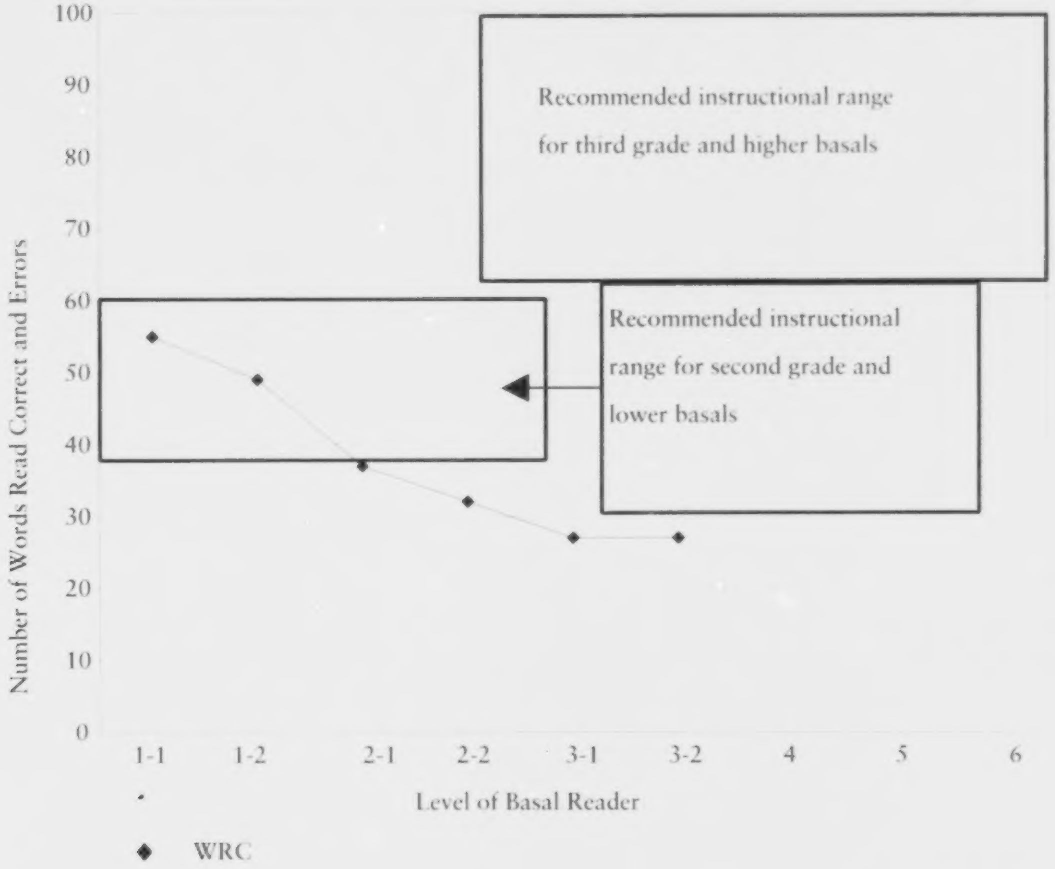
tion. The placement standards are marked by the dark bands. Sara's scores relative to the bands also are displayed. Clearly, her reading performance in third- and second-grade levels of the curriculum is too low for her to be considered successful in that material. The highest level of the curriculum in which she meets the instructional standards is the level 1-3 book (see Table 5). By comparing her expected grade placement, if she were considered a typical student, to her recommended instructional placement, it could be concluded that she is approximately 2 years behind according to the publisher's scope-and-sequence chart.

The second part of the Problem Certification decision involves considering whether the student needs special education to benefit from their education. A student may not need special education services, even though they may meet the eligibility criterion (Rothstein, 1990; Shinn & Hubbard, 1992). Need is determined by examining the student's instructional needs in the context of resources available in general education that may resolve the problem. Only after considering Sara's reading performance in the context of the adequacy of her general education instructional environment, her behavior in that environment, other instructional opportunities available (e.g., lower reading group, peer tutoring), and previous achievement, health, social, and family factors, did the MDT determine that it was unlikely that the problem would be resolved with general education resources alone.

Exploring Solutions

If schools are well-practiced in any assessment activity, it is in testing for purposes of determining special education eligibility. Thus far, this chapter has described the use of CBM within a Problem-Solving model to provide a *needs-based* alternative assess-

Figure 4. Reading survey-level results for Sara



ment approach that arguably works as well or better than conventional eligibility determination activities (Shinn, 1989; Shinn, Good, & Parker, 1999). In part, the advantage of using CBM in Problem Solving for these purposes is the fact that performance and educational need in general curriculum are measured and decisions are tied to specific school performance expectations allowing for conclusions about the least restrictive environment (LRE) to be drawn.

Unfortunately, schools are less well practiced and proficient in assessing students for the purposes of special education intervention planning and evaluation. Using CBM within a Problem-Solving model can remedy this situation. The Problem-Solving model makes explicit the importance of assessing performance in general curriculum for intervention planning during the Exploring Solutions decision. Using CBM in a Problem-Solving model allows a linkage between assessment for eligibility purposes and intervention planning. As will be seen later in this chapter, the use of CBM also allows linkages between assessment for eligibility purposes and intervention planning to intervention evaluation.

As presented in Table 1, the purpose of Exploring Solutions is three-fold: to specify (a) the data-based goals of the intervention in general curriculum, (b) the *content* of the intervention or "what to teach," and (c) the *how* to deliver the intervention or "how to teach." CBM is extremely useful for the goal setting component of Exploring Solutions. Although not useless for intervention planning, other CBA models are more suitable for determining intervention components and processes. Howell's curriculum-based evaluation (e.g., Howell & Nolet, 1999) is especially well-suited for making intervention planning decisions.

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GENERAL GOAL SETTING APPROACH

CBM's linkage between eligibility assessment and intervention planning begins by using the data collected during Problem Identification and Problem Certification to *develop intervention goals* in general curriculum for the student (Fuchs & Shinn, 1989; Shinn & Shinn, 2000). The mechanism for goal setting is the annual goal of a student's IEP. The basic *idea* is simple and works much like conventional practice: annual goals are based on identifying "where the student is now" and where in general curriculum the IEP team would like the student to perform in 1 year if special education services are effective. What differs from conventional practice is that when using CBM it can be determined more directly "where the student is" in general curriculum. This decision is not made using grade-equivalent scores from tests that may not measure a student's curricular skills. Instead, the decision is made by testing students *directly* in the general curriculum they would be expected to learn in general education classrooms. Similarly, expectations about future performance are not gross extrapolations from a test's grade equivalent scores, but are based on SLA in curriculum level materials a student would be expected to perform in 1 year.

This process can be illustrated using the case study. Sara's SLA data showed her as "successful" in the grade 1, level 3 general education reading book. In 1 year, according to the publisher's scope-and-sequence, typical students would be expected to perform proficiently in level 2 of the grade 2 basal. The IEP team individualizes the annual goal by discussing the expectations for individual students. If the IEP team wanted to write a goal that facilitated Sara's catching up (i.e., reducing the discrepancy), they may want her to perform proficiently in a third-grade or even fourth-grade level of the basal series in 1 year. In Sara's case, the IEP team decided that they would consider the special education program to be successful if she performed proficiently in the level 3-2 general education basal reader in 1 year.

WRITING THE ANNUAL GOAL

Annual IEP goals based on CBM data are written in the format of traditional behavioral objectives, and consist of a *behavior* to be measured, *conditions* for attainment, and *criterion* for success. The basic format in reading, math, written expression, and spelling is illustrated in Table 4.

CBM IEP goals use a long-term goal approach to goal setting. In a long-term goal approach, measure-

Table 4. Basic format for CBM annual IEP goals in reading, math, written expression, and spelling

Academic area	*Conditions*	*Behavior*	*Criterion*
Reading	In *(number of weeks until annual review)*, when given a randomly selected passage from *(level and name of reading series)*	Student will read aloud	At *(number of words per minute correct/number of errors)*
Math	In *(number of weeks until annual review)*, when given a randomly selected problems from *(level and name of math series)*, for 2 minutes	Student will write	*(Number of correct digits)*
Written expression	In *(number of weeks until annual review)*, when given a story starter or topic sentence and 3 minutes in which to write	Student will write	A total of *(number of words or letter sequences)*
Spelling	In *(number of weeks until annual review)*, when dictated randomly selected words from *(level and name of spelling series)*, for 2 minutes	Student will write	*(Number of correct letter sequences)*

Note. From L. S. Fuchs and M. R. Shinn, "Writing CBM IEP Objectives" (p. 136). In M. R. Shinn (Ed.) *Curriculum-Based Measurement: Assessing Special Services Children.* New York: Guilford Press. Copyright 1989 by The Guilford Press. Reprinted by permission.

ment of progress toward the goal is designed to answer the question, *Is the student becoming more proficient in reading, math, writing, or spelling in the general education curriculum?* This approach has an advantage over most common long-term goals (e.g., "Will improve 1 year in spelling.") in that they are observable, measurable, and are tied directly to a validated way of *formative evaluation.* With formative evaluation, effective interventions that are identified during instruction are maintained; ineffective interventions are modified.

This long-term goal approach also avoids the numerous difficulties with short-term measurement (e.g., "Will master multiplication facts with 80% accuracy") that are problematic because they are tied to specific units or small skills within a curriculum. The advantages of using CBM and a long-term goal approach are discussed in more detail in Fuchs (this volume) and in Fuchs (1993) and Fuchs and Deno (1991).

The goal-setting process begins with identifying the academic area in which the goal is to be written. Once the academic area is specified, the dynamic indicator for that content becomes the behavior to measure. Therefore, because Sara requires an annual goal in reading, the IEP team knows that the behavior component of the goal is oral reading.

The second step is establishing the goal's *conditions.* The *time frame* is the time at which the goal is expected to be accomplished. In Sara's school system, all IEP goals expired on their anniversary date, 1 year from the time of writing. Therefore, Sara's annual goal would begin, "*In 36 weeks (1 academic year)...*" The next task is *specification of the level of curriculum* the student will be expected to perform proficiently in in one year. This task requires knowledge of the general education curriculum scope-and-sequence, a judgment of how much is expected to be accomplished, and the ramifications on how the problem is defined. For example, writing an annual goal so that a special education student is expected to make less than 1 year's growth in general education curriculum is constructing an intervention that will leave a student further behind general education peers *and* the intervention would still be considered effective! Writing an annual goal so that a special education student is expected to make more than 1 year's growth in general education curriculum is constructing an intervention that, if successful, will make the student's skills more like general education peers. See Fuchs and Shinn (1989) and Shinn, Deno, and Fuchs (in press) for more detail. Because Sara's IEP team specified level 3-2 as the annual goal material, when combined with the time frame and the behavior, her goal so far would read as follows: "*When given a randomly selected passage from level 3-2 of the ABC curriculum, Sara will read aloud...*"

The final task in setting annual goals requires specification of a *criterion for performance.* The question for Sara is, *How well do we want her to read the level 3-2 basal if her intervention program is to be considered successful?* Two broad approaches can be used to identify a criterion for success, with or without local norms. When local norms are available, the IEP team can use the level of performance of typical students in the level of the curriculum identified in the conditions section as the criterion. For example, in Sara's case, because the IEP team distinguished book 3-2 as the level of the curriculum they desired in 1 year, they could expect that Sara will read it as well as the typical third-grader in the Fall or 100 words read correctly. Alternatively, they could expect that Sara would read the level 3-2 reader as well as an end-of-year third grader or 133 words read correctly.

In the absence of local norms, other strategies may be used to identify a criterion for success on the annual goal. *Expert judgment* requires that IEP teams use as an organizer that the student be expected to perform at a significantly higher level in a more difficult level of the curriculum in 1 year. The use of *instructional placement standards* is another strategy for goal setting without local norms. It is based on the setting the criterion for success at a level of performance such that the curriculum is appropriate for instructional purposes for the student in 1 year. In reading, for example, the IEP team could use the instructional placement standards given earlier in the chapter. Using this approach in Sara's case, the criterion for success could be that in 1 year she would read a randomly selected passage from level 3-2 between 70 and 100 words correctly. It is important that a more specific value is used rather than a range. If a high level of proficiency is expected, then the IEP team could select the upper end of the range (100 words read correctly) as the criterion for success. If a lower level of proficiency is satisfactory, then the IEP team could select the lower end of the range (e.g., 75 words read correctly). See Fuchs (this volume) and

Fuchs and Shinn (1989) and Shinn, Deno, and Fuchs (in press) for more information on writing annual goals using CBM.

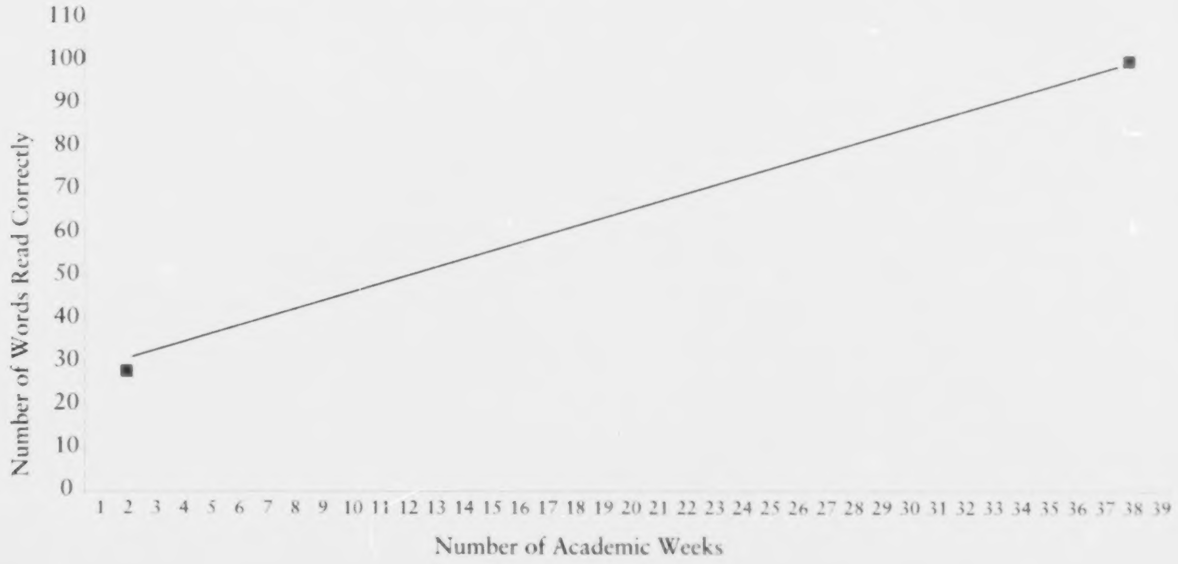
The actual IEP annual goal written by Sara's IEP team was as follows: *When given a randomly selected passage from level 3-2 of the ABC curriculum, Sara will read aloud 100 words correctly per minute.* The team also added an accuracy criterion that she would read a randomly selected passage with five or fewer errors (approximately 95% accuracy). This goal was based on a rationale to have Sara proficient in an end-of-third-grade reader by the time she was in fourth grade. The team considered reading at 100 words correctly, the median level of third graders in that level in the Fall, as proficient.

Evaluating Solutions

The use of CBM SLA data to write annual IEP goals links assessment for eligibility decision making to intervention planning. The use of CBM IEP goals links intervention planning to intervention evaluation by providing a standard for determining intervention effectiveness. As presented in Table 1, the purpose of Evaluating Solutions is to monitor student progress toward IEP goals and determine an intervention's effectiveness. As with other decisions in the Problem-Solving model shown earlier, the annual goal can be represented graphically as shown in Figure 5 to clarify communication of expectations. In the figure, her initial survey-level data in level 3-2, the annual goal material, represents her current performance. The intersection of the criterion for success (100 words read correctly) and the goal date (36 weeks) forms her *aim*. The line drawn from her current performance to her aim forms her aimline or *expected rate of progress*. By comparing her actual rate of progress, the *trendline*, determined by collected samples of her reading from level 3-1 over time, with her expected rate of progress, a decision can be made about treatment effectiveness and the need for program modification. When the actual rate of progress exceeds the expected rate of progress, the student's goal is raised. When the actual rate of progress is below the expected rate of progress, the student's intervention program is changed. See Fuchs (this volume) and the work of Lynn and Douglas Fuchs for more information on this topic.

Progress monitoring data usually are collected once or twice per week by a special education teacher delivering the intervention or via a microcomputer (Fuchs, 1998; Fuchs, Hamlett, & Fuchs, 1999). In reading, students read one probe each testing occa-

Figure 5. Graphic display of Sara's IEP goal translated into expected rate of student progress



sion. Testing items are selected from a pool that represents the domain of *all* the items from the goal level of the curriculum. With Sara, this would represent a sample from all passages in the level 3-2 basal reader. Probes are created by randomly selecting subsets of items from this large pool and student progress is measured repeatedly on these probes. This process produces a set of parallel form CBM probes with known technical adequacy.

The results of testing Sara one to two times per week using randomly selected reading probes from level 3-1 are shown in Figure 6. The data are plotted soon after testing on an equal interval graph. A minimum of 10 data points is suggested before a reliable decision can be made about the effectiveness of an intervention program (Good & Shinn, 1990).

On Sara's graph, after the first 10 data points, it is clear that she is meeting or exceeding her expected rate of progress; nine of the 10 data points are above the aimline. This is a good indication that the instructional intervention is effective and should be maintained.

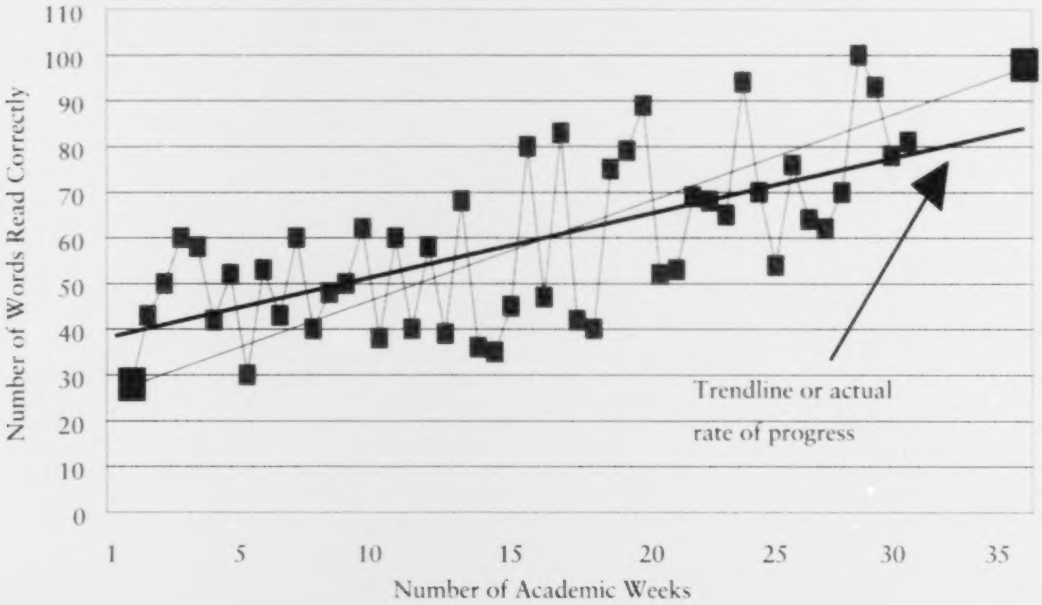
As the school year goes on, Sara's teacher continued to evaluate her progress routinely. At the end of the academic year, she had been tested 47 times during the 30-week period. Her overall rate of progress, the trendline, is represented by the heavy black line that is calculated by drawing an ordinary least squares regression line through all the data. The trendline corresponds closely to the slope of the aimline, indicating an intervention program that is effective.

As mentioned earlier in the chapter, when the effects of instructional interventions are examined systematically and continuously, educators can make data-based decisions about whether to maintain or change interventions. Students need not receive instructional programs that do not meet their needs for long periods. Unsuccessful interventions can be changed to better meet students' needs. Educators need not discard or modify programs that may be working. The net result is that student achievement outcomes are improved significantly (Fuchs, Deno, & Mirkin, 1984; Fuchs & Fuchs, 1986, 1999).

Problem Solution

It can be argued persuasively that the kinds of testing activities that characterize long-term decisions about students' educational needs (e.g., annual reviews or special education exit) are little more than psychome-

Figure 6. Graphic display of Sara's rate of progress relative to her IEP goal



tric superstitious behavior. Annual reviews rely heavily on published achievements tests that were not designed to evaluate the progress of individual students (Carver, 1974; Marston, 1989). Special education exit decisions occur so rarely that part of the problem must be related to measurement of outcomes. It is estimated that no more than 2% of special education students are exited each year (Fuchs, Fuchs, & Fernstrom, 1993). However, considerable numbers of these students have academic skills equal to those of general education students. For example, it has been demonstrated that in at least three school districts, 30–40% of special education students served more than 2 years in a pull-out program with an IEP objective in reading read as well or better than other low-performing readers in their general education classroom (Shinn, Baker, Habedank, & Good, 1993; Shinn, Habedank, Rodden-Nord, & Knutson, 1993). These students had not been considered for termination.

A Problem-Solving model resolves some problems in determining students' long-term needs and the appropriateness of continued special education services. As presented in Table 1, Problem Solution decisions are tied conceptually to the assessment activities that defined the problem in the first place. Is there *still* a discrepancy between what is expected for the student and how the student performs? Procedurally, the discrepancy is measured again and is augmented by study of the special education student's rate of progress toward his or her IEP annual goal.

The logical time to make Problem Solution decisions is during the periodic and annual reviews that are required by law (Rothstein, 1990). To date, periodic reviews rely heavily on informal subjective opinions of the teacher with responsibility for the intervention plan. Rarely are data collected or analyzed systematically specifically for this purpose. Annual review decisions usually are more structured and are oriented around the collection of student outcome information. CBM data can be collected efficiently at both periodic and annual reviews.

PERIODIC REVIEWS

Periodic reviews are conducted with two pieces of CBM assessment data: the student progress graph and new peer-referenced testing results. These data are used to answer the questions, *Is the student making progress?* And if so, is the progress "important?" The first question is answered by examining the student's graph showing the rate of progress toward the IEP annual goal. As in making Evaluating Solutions decisions, intervention effectiveness is determined by comparing the student's trendline to the aimline. If the trendline exceeds the aimline, then two explanations are possible: Either the intervention is effective or the annual goal is too low. If the trendline is below the aimline, then two other explanations are possible: Either the intervention program may be ineffective and needs to be changed or the student's annual goal may be too high.

The second question about the importance of the student progress helps separate out issues of intervention effectiveness and goal appropriateness. Student change is defined as "important" if it results in *reduced discrepancies*. Data to make this decision are collected by testing the special education student in a norm-referenced manner like in Problem Identification. Again, random samples of the curriculum from the student's expected grade placement are used for testing. However, unlike Problem Identification, this testing takes place in one sitting rather than by collecting repeated samples over time. The student's scores are compared to same-grade peers, using the type of summary metric that was employed in Problem Identification.

Changes in discrepancy ratios or percentile ranks are noted. Reduced discrepancies indicate that the special education student has made meaningful, important growth. When combined with the student IEP graph information, the change in relative standing allows for an evaluation of a student's overall special education program, including intervention effectiveness and goal appropriateness. The use of these types of data is illustrated in the case study. A periodic review was conducted with Sara the first trimester after her special education certification (Winter), approximately 10 weeks after her special education placement. Her IEP progress graph at week 10 showed her consistently scoring at or above her aimline (see Figure 7). Sara also was tested using three randomly selected passages from the same level of the reading series as her initial Problem Identification testing. This process took less than 10 minutes. Her scores, summarized in percentile ranks, are shown in Table 5. The number of words she read correctly increased to 52 and the magnitude of the discrepancy decreased from performance at the 2nd percentile compared to same-grade peers to the 4th percentile.

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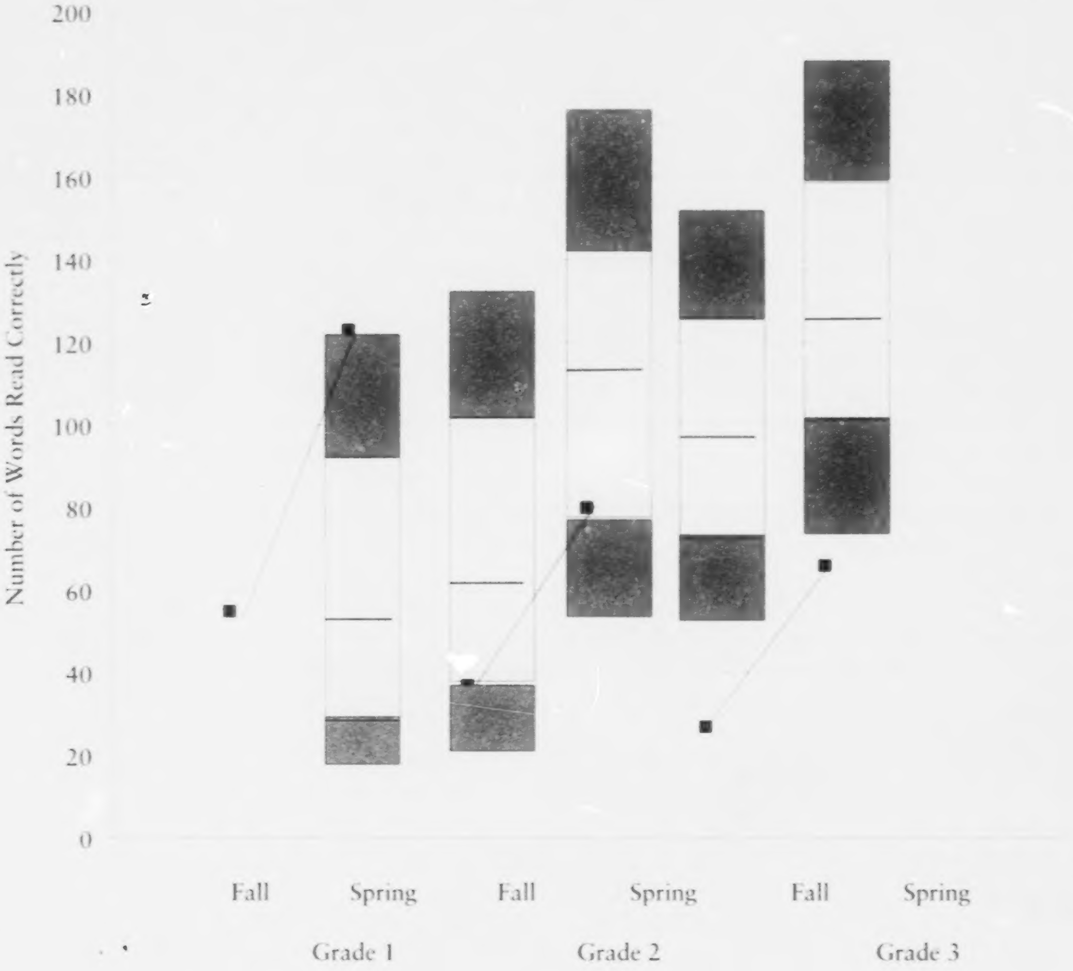
Figure 7. Fall and Spring SLA results for annual reviews



Both pieces of data indicate that the progress she is making toward her IEP goal is educationally meaningful; that is, she is reducing the reading skill discrepancy. If she were achieving her IEP goal, but not reducing the discrepancy, then we could conclude that perhaps the IEP goal was not ambitious enough to result in real improvement. Conversely, if she were not making progress toward her IEP goal, but was reducing the peer discrepancy, then it could be concluded that her goal was too ambitious and should be lowered.

Annual Reviews

The annual review process is a more in-depth assessment of a student's skill level and rates of progress. Again, progress toward the IEP annual goal is investigated by comparing actual versus expected student progress on the student performance graph. As can be seen in Sara's graph, at week 30 when the annual review was conducted her actual rate of progress paralleled her expected rate. Overall, the annual review team believed the special education intervention to be effective and considered her to have attained the annual goal. Some concern was expressed over the current effectiveness of the program, however, as seven of the last 10 data points fell below the aimline.

For annual reviews, more information is collected on the current severity of the problem with a new SLA identical to the one conducted during Problem Certi-

Table 5. Periodic and annual review reading assessment as part of problem solution decisions for Sara in reading

Level of curriculum	*Sara's Fall median WRC*[a]	*Sara's Fall percentile*[a]	*Sara's Winter median WRC*[b]	*Sara's Winter percentile*	*Sara's Spring median WRC*[a]	*Sara's Spring percentile*[a]
3-2	27	2nd	53	4th	69	6th
3-1	27	NA			66	NA
2-2	32	NA			81	NA
2-1	37	15th			80	26th
1-3	49	NA			106	NA
1-2	55	NA			123	89th

Notes: WRC, words read correctly.

[a] Based on SLA.

[b] Peer-referenced testing compared to same grade-students only.

fication. Not only are the SLA data used to determine problem severity, but they are also used to write the annual goal for the next year. The results of Sara's annual review SLA are also presented in Table 5. Sara's number of words read correctly improved again in third-grade material and the discrepancy from peers was reduced as she improved from the 4th to the 6th percentile. Her reading skills also improved significantly from Fall in all levels of the general education reading series.

Annual review SLA results can be displayed graphically to show the growth relative to norm groups as shown in Figure 7. With adequate progress toward the IEP goal and a reduced discrepancy, the team considered the intervention successful and discussed Sara's continued *need* for the intervention.

A key decision in Problem Solution is determining when additional resources such as special education are no longer needed. In a Problem-Solving model, this decision is reached when the discrepancy is no longer important; that is, special education students' skills are within the range of students in general education classrooms. In this instance, students may be exited from special education and returned for instruction in less restrictive environments. For more detail on this topic, see Shinn, Powell-Smith, Good, and Baker (1997), Shinn, Powell-Smith, and Good (1996), and Powell-Smith and Habedank (1998). Use of CBM to assist in making special education exit decisions resulted in an increase from 4% of special education students exited on an annual basis to 20% (Marston & Magnusson, 1988).

SUMMARY

CBM is a consistent and continuous measurement system that was designed to function as DIBS. These DIBS are to be used as educational thermometers, tools to identify an academic problem and to decide whether the intervention for that problem is effective. CBM is inextricably tied to a Problem-Solving model in which data are used to guide decision making. Decisions are tied to general education curricula and often to how typical students perform in that curriculum. However, the critical feature that defines CBM is the collection of data on repeated standard tasks for *individual* students. When used to evaluate and modify instructional intervention programs for individual students, research findings consistently have found significantly improved outcomes. Programs for special education students are improved by allowing for validation and modification of individual interventions, better IEPs can be written, and assessment can be linked to intervention. Because most CBM data are collected by trained special education and general education teachers, with consultation and supervision by school psychologists, the special education eligibility testing load for school psychologists can be reduced substantially. This reduction in testing load can be used to increase the amount of time school psychologists spend in indirect and direct service provision to all students in America's schools.

One of my mentors once paraphrased an old saying, commenting, "school psychologists are trained to admire (i.e., identify) problems, not solve them."

In more ways than one, CBM and its use in a Problem-Solving model allows for this conception of school psychology practice to change.

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In this article, the current aptitude-treatment interaction instructional technology is examined and determined to be insufficiently responsive to individual differences of students. Instead, a formative evaluation model is proposed as an idiographic approach to building more effective programs for individual students. In this model, aptitude differences at the outset of a program are deemphasized and methodology for tailoring programs to individual students during instruction becomes the focus.

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This paper serves as a primer for comparing the advantages and disadvantages of types of outcome monitoring assessment systems, including specific sub-skill mastery measurement (short-term goal approach) and general outcome measurement (long-term goal approach) progress monitoring. General outcome measurement emerges as the most advantageous method for monitoring student progress. A case study is presented to illustrate the differences between approaches.

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This paper serves as an updated critique of methods of monitoring student achievement outcomes according to a set of standards that includes technical adequacy and feasibility.

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This book contains contributions of the work of the core-group of researchers and school practitioners (Deno, L. Fuchs, Marston, Shinn, Tindal, Allen) who developed and implemented CBM. Specific procedures for implementing CBM in school settings are detailed. General background information and conceptual issues surrounding the development and use of CBM as an alternative to traditional school psychology practice are discussed also.

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This edited book presents information on a range of applications of CBM to Problem Solving, including points of confusion, use with English-Language Learners and computers.

AUTHOR NOTE

This chapter was supported in part by grant No. 84.029D60057 Leadership Training in Curriculum-Based Measurement and Its Use in a Problem-Solving Model sponsored by the U.S. Department of Education, Office of Special Education Research. The views expressed within this paper are not necessarily those of the U.S. Department of Education.

45 Best Practices in Using Dynamic Indicators of Basic Early Literacy Skills (DIBELS) in an Outcomes-Driven Model

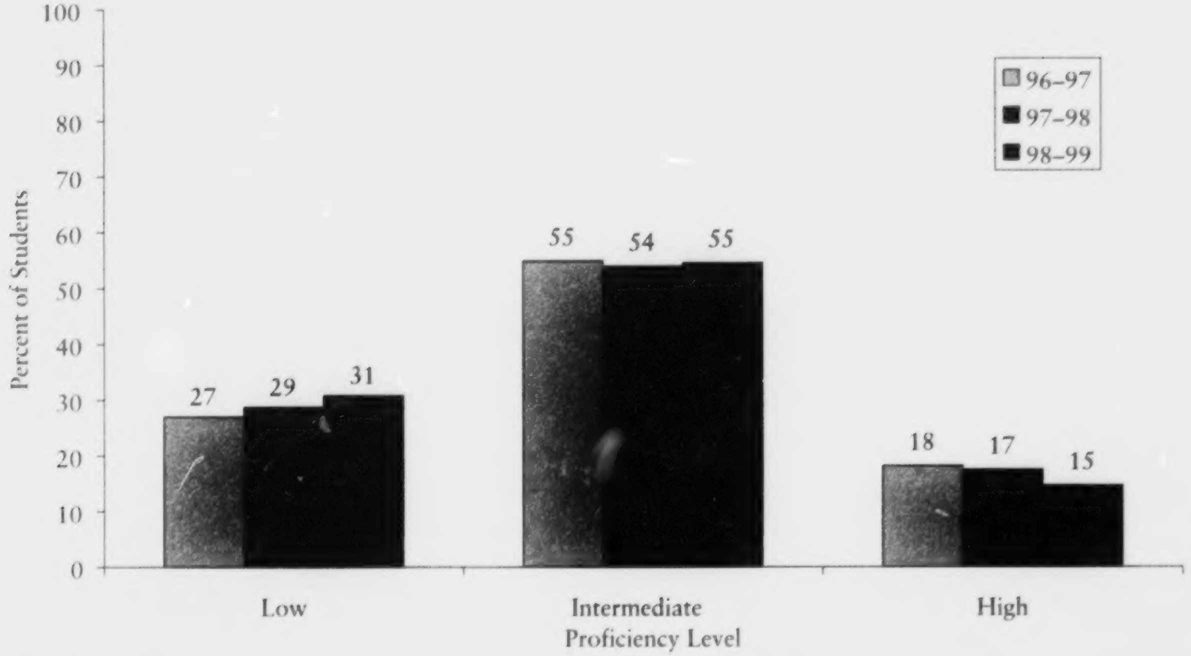
Roland H. Good III
University of Oregon
Jerry Gruba
Heartland Area Education Agency 11
Ruth A. Kaminski
University of Oregon

OVERVIEW

Reading is an educational outcome essential to academic achievement and, ultimately, success in life. Children who develop good reading skills are more likely to succeed at school and become productive members of our society (Adams, 1990). However, children who develop poor reading skills are more likely to experience academic and behavioral difficulties at school (Schenk, Fitzsimmons, Bullard, Taylor, & Satz, 1980) and be at risk for later problems such as juvenile delinquency, truancy, and substance abuse (McGill-Franzen, 1987). Children considered at especially high risk for this scenario include those from economically disadvantaged homes as well as those with special needs (Marvin & Mirenda, 1993; National Research Council, 1998; Rush, 1999). For example, in 1998, nearly 4 in 10 fourth-grade children nationwide failed to achieve even partial mastery of the reading skills needed for school success. In schools with the highest levels of poverty, nearly 70% of fourth-grade children failed to read at this basic level (Donahue, Voelkl, Campbell, & Mazzeo, 1999). These data are alarming. How educators respond to the data will determine whether or not these trends in reading achievement can be reversed.

Few people would dispute that helping children become proficient readers must be a priority for elementary schools. The recent focus at the national level on reading (e.g., Goals 2000: National Reading Summit, 1998; Reading Excellence Act, 1999) has prompted state departments of education and school districts to establish standards for reading achievement by the end of third or fourth grade. In Iowa, for example, the Department of Education requires that reading achievement be evaluated and reported by districts to the public in the fourth grade. Figure 1 shows aggregated student reading achievement data from the Iowa Test of Basic Skills (ITBS) that will be reported to the public by all districts. Districts will report percentages of students in three performance categories, Low, Intermediate, and High. Students are categorized based on their performance relative to national ITBS norms from 1992. Two problems are apparent in this figure. First, over one in four fourth-grade students were judged to be low proficiency readers. Second, the percent of students judged to be low proficiency readers is increasing while the percentage of students in the high groups is decreasing. A primary limitation of the data gathered is that they are summative. By third or fourth grade, students are performing well below their peers, and it is too late to modify beginning reading instruction to promote the acquisition of initial reading skills. What is needed for prevention of reading failure is to *begin early* and *assess dynamically.* The purpose of this chapter is to describe the use of Dynamic Indicators of Basic Early Literacy Skills (DIBELS) in an Out-

Figure 1. Fourth grade reading achievement levels on Iowa Test of Basic Skills



Courtesy of Hood (2000).

comes-Driven Model to identify children early who may need additional instructional support, and to evaluate and modify instruction on an ongoing, formative basis to ensure that all children achieve high stakes reading goals.

Begin Early

The path to reading proficiency begins long before children begin school and receive formal reading instruction. Literacy development begins in infancy as children learn to communicate using oral language and grows as children are exposed to print and gain awareness of the connection between print and oral language. To prevent reading difficulties and promote reading success, it is essential that preschool children receive early and appropriate learning experiences that promote the acquisition of early literacy skills. The quality of these experiences will contribute to later school success and the prevention of future school problems, thus lessening the risk of secondary disorders (e.g., behavioral problems, substance abuse).

It is apparent from the research base, however, that simply preparing children for kindergarten is not enough. Much of the early efficacy research on Head Start, for example, has focused on longitudinal outcomes and related "fade-out effects." The most cited report is the Head Start Evaluation, Synthesis, and Utilization Project (McKey et al., 1985), which reported immediate positive effects of Head Start followed by declining performance in subsequent years resulting in few meaningful differences between Head Start and control groups by the end of first grade. Given that family and environmental risk variables tend to remain relatively stable during the preschool and early elementary school years (Burchinal, Campbell, Bryant, Wasik, & Ramsey, 1997), it is really not surprising that early childhood program graduates begin school with the readiness skills they need but soon fall behind their more advantaged peers. It appears clear that early intervention by itself, whether in the form of Head Start or any other preschool program, is not sufficient to inoculate children against the continuing effects of environmental risk factors (Zigler & Styfco, 1994).

Assess Dynamically

To *prevent* the occurrence of reading failure and ensure school success for all children, we need to do more than simply prepare children to be ready for school. If we are to maintain the gains made by families and early childhood programs in preparing children for school, we need a dynamic, prevention-oriented, school-based assessment and intervention system designed to monitor the growth and development of children through the critical early school years. Such a system can preempt early academic and social difficulties and enable children to maintain gains and progress step-by-step toward outcomes that will result in school success (Good, Simmons, & Kame'enui, 2001).

For a prevention-oriented, school-based system of assessment to be effective, it must reliably (a) measure growth on foundational reading skills on a frequent and ongoing basis, (b) predict success or failure on criterion measures of performance (i.e., high-stakes tests), and (c) provide an instructional goal that, if met, will prevent reading failure and promote reading success. The minimum criteria for best practices in early literacy assessment to meet the requirements above are outlined in Table 1.

DYNAMIC INDICATORS OF BASIC EARLY LITERACY SKILLS

Techniques for measuring growth and development of early literacy skills in kindergarten and first grade that meet the criteria outlined in Table 1 have been developed at the University of Oregon (Kaminski & Good, 1996; Kaminski & Good, 1998). DIBELS were developed to monitor growth in the acquisition of critical early literacy skills to (a) identify children in need of intervention and (b) evaluate the effectiveness of intervention strategies. Ongoing research on DIBELS, supported by the Early Childhood Research Institute on Measuring Growth and Development

Table 1. Checklist of criteria for early literacy assessment

Yes	*No*		*Content*
☐	☐	1.	Does the assessment measure *phonological awareness* skill as a clear, explicit priority?
☐	☐	2.	Does the assessment measure *alphabetic principle* skill as a clear, explicit priority?
☐	☐	3.	Does the assessment measure *accuracy and fluency with connected text* as a clear, explicit priority?
Yes	*No*		*Practical Considerations*
☐	☐	4.	Is the assessment efficient and economical with minimal disruption of instructional time?
☐	☐	5.	Is the assessment standardized/replicable?
☐	☐	6.	Is the assessment repeatable over time with many alternate forms?
☐	☐	7.	Is the assessment simple to learn, administer, and score?
Yes	*No*		*Technical Characteristics*
☐	☐	8.	Does the assessment have evidence of reliability sufficient to be reasonably confident that low scores represent low skills needing intervention?
☐	☐	9.	Does the assessment have evidence of validity especially predicting success and difficulty achieving important reading outcomes?
☐	☐	10.	Does the assessment have evidence of sensitivity to changes in students' skills due to instruction?
Yes	*No*		*Decision-Making Utility: Individual*
☐	☐	11.	Does the assessment identify children who *need additional instructional support* to achieve reading goals?
☐	☐	12.	Does the assessment provide *instructional goals* to change first-grade reading outcomes for children at risk of reading difficulty?
☐	☐	13.	Does the assessment inform decisions about the *effectiveness of instruction* on a week-by-week, student-by-student basis?
Yes	*No*		*Decision-Making Utility: Systems*
☐	☐	14.	Does the assessment inform decisions about the effectiveness of the *core curriculum and instruction* for most children?
☐	☐	15.	Does the assessment inform decisions about the effectiveness of the *system of additional instructional support* for children at risk of reading difficulty?
☐	☐	16.	Does the assessment inform decisions about class, school, and district *year-to-year improvement* in early literacy skills and reading outcomes?

(ECRI-MGD), has generated a large database supporting the psychometric adequacy of the DIBELS (Good et al., in press). We have a clear knowledge based on the critical DIBELS benchmarks in kindergarten and first grade for successful reading outcomes. In addition, we have clear evidence of the level of skill that predicts risk. As early as fall of kindergarten, for example, we are able to predict, with a high degree of accuracy, which children will have significant difficulty learning essential literacy skills unless additional instructional support is provided. Good et al. (2001) describe the utility of DIBELS within a preventive assessment approach. The DIBELS assessment approach will be described here with respect to each of the criteria for best practice in early literacy assessment delineated in Table 1.

Content: Measuring the Foundational Skills of Beginning Reading

Converging and convincing evidence substantiates that reading competence is causally influenced by proficiency on foundational skills in beginning reading (National Reading Panel, 2000; National Research Council, 1998). We refer to the recognized and empirically validated foundational skills related to reading outcomes as the "big ideas" in beginning reading. Big ideas are skills and strategies that are prerequisite and fundamental to later reading success. They are skills that differentiate successful from less successful readers and, most important, are amenable to change through instruction (Kame'enui & Carnine, 1998; Simmons & Kame'enui, 1998). In the area of beginning reading, foundational skills include: (a) phonological awareness or the ability to hear and manipulate the sound structure of language, (b) alphabetic principle including alphabetic understanding or the mapping of print to speech and the phonological recoding of letter strings into corresponding sounds and blending stored sounds into words, and (c) accuracy and fluency with connected text or the facile and seemingly effortless recognition of words in connected text (Adams, 1990; National Reading Panel, 2000; National Research Council, 1998; Simmons & Kame'enui, 1998).

Practical Considerations

DIBELS measures have been developed to meet the practical characteristics that enable DIBELS to be used frequently and repeatedly over time to measure growth. Thus, each of the measures is brief, efficient, economical, and relatively simple to administer and score, with multiple alternate forms. Each of the measures is described below.

1. *DIBELS Onset Recognition Fluency (OnRF)* is a standardized, individually administered measure of phonological awareness that assesses a child's ability to recognize and produce the initial sound in an orally presented word (Kaminski & Good, 1998; Laimon, 1994). The examiner presents four pictures to the child, names each picture, and then asks the child to identify (i.e., point to or say) the picture that begins with the sound produced orally by the examiner. For example, the examiner says, "This is sink, cat, gloves, and hat. Which picture begins with /s/?" and the student points to the correct picture. The child is also asked to orally produce the beginning sound for an orally presented word that matches one of the given pictures. The examiner calculates the amount of time taken to identify/produce the correct sound and converts the score into the number of onsets correct in a minute. The OnRF measure takes about 3 minutes to administer and has more than 20 alternate forms to monitor progress.

2. *DIBELS Phoneme Segmentation Fluency (PSF)* is a standardized, individually administered test of phonological awareness (Kaminski & Good, 1996). The PSF measure assesses a student's ability to segment three- and four-phoneme words into their individual phonemes fluently. The PSF measure has been found to be a good predictor of later reading achievement and is intended for use with students from the winter of kindergarten to the middle of first grade (Kaminski & Good, 1996). The examiner administers the PSF task by orally presenting words of three to four phonemes. The student is asked to produce verbally the individual phonemes for each word. For example, the examiner says, "sat," and the student says /s/ /a/ /t/ to receive three possible points for the word. After the student responds, the examiner presents the next word, and the number of correct phonemes produced in 1 minute determines the final score. The PSF measure takes about 2 minutes to administer and has more than 20 alternate forms for monitoring progress.

3. *DIBELS Nonsense Word Fluency (NWF)* is a standardized, individually administered test of the alphabetic principle—including letter-sound correspondence and of the ability to blend letters into words in which letters represent their most common sounds. The student is presented an 8.5" x 11" sheet of paper with randomly ordered VC and CVC nonsense words (e.g., sig, rav, ov) and asked to produce verbally the individual letter sound of each letter or verbally produce, or read, the whole nonsense word. For example, if the stimulus word is "vaj" then the student could say /v/ /a/ /j/ or say the word "vaj" to obtain a total of three letter-sounds correct. The student is allowed 1 minute to produce as many letter-sounds as he or she can, and the final score is the number of letter-sounds produced correctly in 1 minute. Because the measure is fluency based, students receive a higher score if they are phonologically recoding the word and receive a lower score if they are providing letter sounds in isolation. The NWF measure also takes about 2 minutes to administer and has more than 20 alternate forms for monitoring progress.

4. *DIBELS Letter Naming Fluency (LNF)* is a standardized, individually administered test that provides a measure of risk (Kaminski & Good, 1996). Students are presented with upper- and lower-case letters arranged in a random order and are asked to name as many letters as they can. Students are told if they do not know a letter they will be told the letter. The student is allowed 1 minute to produce as many letter names as he or she can, and the score is the number of letters named correctly in 1 minute. Students are considered *at risk* for difficulty in achieving early literacy benchmark goals if they perform in the lowest 20% of students in their district, that is, below the 20th percentile using local district norms. Students are considered at *some risk* if they perform between the 20th and 40th percentile using local norms. Students are considered at *low risk* if they perform above the 40th percentile using local norms.

5. *Curriculum-Based Measurement (CBM) of Oral Reading Fluency (CBM ORF)* is a standardized procedure to assess accuracy and fluency with connected text. A version of CBM ORF has been published as the Test of Reading Fluency (TORF) (Children's Educational Services, 1987). The TORF is a standardized set of passages and administration procedures designed to (a) identify children who may need further intensive assessment and (b) measure growth in reading skills (Children's Educational Services, 1987, p. 1). Passages were calibrated for each grade level, and student performance is measured by having students read each of three passages aloud for 1 minute. Words omitted, substituted, and hesitations of more than 3 seconds are scored as errors. Words self-corrected within 3 seconds are scored as accurate. The median correct words per minute from the three passages is the oral reading fluency rate.

Technical Characteristics

Evidence of reliability, validity, and sensitivity for DIBELS has been investigated in a series of studies and is summarized in Table 2. Alternate-form reliability of the DIBELS measures are generally adequate and range from .65 to .93. While the level of reliability for OnRF is low (.65) with respect to standards for educational decision making (e.g., Salvia & Ysseldyke, 2001), the assessment can be repeated on multiple days using multiple alternate forms of the measure. By repeating the brief assessment five times on five different days, the resulting average score would have a reliability of .90 (Nunnally, 1978). The robust reliability of aggregate scores will be used in the decision-making model to follow. When aggregated, the reliability of the other measures ranges from .90 to .98 for the average of three repeated assessments.

The concurrent criterion-related validity of DIBELS measures with other standardized measures of early literacy skills (e.g., Metropolitan Readiness Test, Stanford Diagnostic Reading Test, Woodcock-Johnson Psycho-Educational Battery) ranges from .36 for OnRF in the beginning of Kindergarten to .81 for LNF. Predictive validity correlations with outcomes 1 year later (e.g., PSF in winter of kindergarten to CBM reading in spring of first grade) range from .36 to .82. All of the measures demonstrate sensitivity to growth over time, with a slope of 1 to 2 correct responses per minute per week.

The DIBELS measures link to CBM ORF beginning in the winter of first grade. A series of studies has confirmed the technical adequacy of CBM reading.

Table 2. Technical Adequacy of DIBELS

	Reliability			Validity		Sensitivity: Slope per week		
DIBELS measure	Single probe	Multi-probe	Slope	Concurrent	Predictive	Mean	SD	Study
OnRF	.65	.90	.35	.36,[a] .48[b]	.36,[a] .45[c]	1.34	0.81	Good et al., in progress; Laimon, 1994; Ditkowski, in progress
PSF	.88	.96	.71	.54,[b] .65[d]	.62,[d] 68[be]	1.12	1.06	Good et al., in progress; Kaminski and Good, 1992, 1996
NWF	.92	.98	.71	.59[b]	.66,[a] .82[c]	2.08	1.62	Good et al., in progress
LNF	.93	.98		.70,[a] .77[d]	.65,[a] .76,[c] .81[c]			Good et al., in progress; Kaminski and Good, 1992, 1996

Note. Multi-probe reliability based on the mean of five probes for OnRF and the mean of three probes for PSF, NWF, and LNF. Reliability of slope estimates based on weekly repeated assessments for 10–11 weeks; $p < .05$.

[a] Woodcock-Johnson Psycho-Educational Battery Total Reading cluster score.

[b] DIBELS PSF.

[c] CBM ORF.

[d] Metropolitan Readiness Test.

[e] Stanford Diagnostic Reading Test.

Test-retest reliabilities of elementary students ranged from .92 to .97; alternate-form reliability of different reading passages drawn from the same level ranged from .89 to .94 (Tindal, Marston, & Deno, 1983). Criterion-related validity studied in eight separate studies in the 1980s reported coefficients ranging from .52-.91 (Good & Jefferson, 1998).

Decision-Making Utility of DIBELS

BENCHMARKS

The benchmark goals and timelines for a trajectory of progress toward high-stakes reading outcomes are summarized in Table 3 and validated by research in different settings (Good et al., in progress; Good, Simmons, & Kame'enui, 2001). For example, OnRF provides an indicator of the child's knowledge and awareness of initial sounds in words, an aspect of phonological awareness desired by winter of kindergarten if the child is on track for reading outcomes. PSF provides an indicator of phonological awareness skills necessary by spring of kindergarten. By winter of first grade, students should display alphabetic principle skills on NWF, and by spring of first grade they should reach target levels of ORF, a measure of accuracy and fluency with connected text. By spring of second grade and spring of third grade, adequate progress on measures of ORF is necessary to be on track for high-stakes reading outcomes. The model is designed to make explicit a set of parsimonious linkages between earlier and later skills at different points in time.

In this discussion of benchmark goals, it is important to clarify that the DIBELS benchmark goals summarized in Table 3 are goals for the lowest student—not goals for the middle student or 90% of students, but goals for the lowest-achieving student in the school. Each goal is a stepping stone toward literacy. The sequence builds upon prior goals, with achievement of each goal supporting achievement of the subsequent goal (with effective instruction). The first goal is modest: for the student to be confident and fluent with the initial sounds of words, that the word "cat" starts with the sound /k/, for example. The DIBELS benchmark goals are the minimal level students need to achieve to be confident they are on track for literacy outcomes. The ultimate goal is for 100% of children within a school to achieve each benchmark.

Individual Decision Making Within an Outcomes-Driven Model

The Outcomes-Driven Model described here is based on the foundation of a problem-solving model (see Deno, 1989; Shinn, 1995) and the initial application of the problem-solving model to early literacy skills (Kaminski & Good, 1998). The Outcomes-Driven Model was developed to provide a prevention-oriented assessment and intervention decision-making

Table 3. Benchmark goals and timelines for a trajectory of progress toward high-stakes reading outcomes

Timeline	*Measure*	*Benchmark goals for the achievement of reading*	*May need intensive instructional support*
Winter, kindergarten	DIBELS OnRF	25–35	Below 10
Spring, kindergarten	DIBELS PSF	35–45	Below 10
Winter, first grade	DIBELS NWF	50	Below 30
Spring, first grade	CBM ORF	40	Below 10
Spring, second grade	CBM ORF	90	Below 50
Spring, third grade	CBM ORF	110	Below 70

system and designed to *preempt* early reading difficulty and ensure progress step-by-step toward outcomes that will result in established, adequate reading achievement. The Outcomes-Driven Model accomplishes steps to outcomes through a set of five educational decisions: (a) identifying need for support, (b) validating need for support, (c) planning support, (d) evaluating and modifying support, and (e) reviewing outcomes. A key premise of the Outcomes-Driven Model is that failure is not an option. If we promise all students they will be readers, each step must be achieved in time. We need to match the amount and type of instructional support with the needs of individual students to enable all students to reach each benchmark step. Some students will need substantial, intensive, individualized support to reach each step. Others will benefit from regular, good, large-group, classroom instruction. Some students may achieve important reading outcomes regardless of the instruction provided. The goal of the Outcomes-Driven Model is to match students with the instructional support necessary to achieve each step to reading *before* a pattern of reading difficulty and failure has been established.

IDENTIFYING NEED FOR SUPPORT

The first step in the Outcomes-Driven Model is to identify children early who *may* need additional instructional support to meet a benchmark goal. To identify need for support, a benchmark assessment using selected DIBELS and CBM probes is administered to all children in the school three times per year—at the beginning, middle, and end of the school year. The benchmark assessment is administered one-on-one with a tester and student and takes about 7 minutes per student. A team of five or six testers can assess a class of 25 students in approximately 30 minutes. The benchmark assessment provides information regarding the performance of all children in the school with respect to benchmark goals. The benchmark assessment also identifies individual students who may need additional instructional support to achieve the next benchmark goal.

Individual students needing additional instructional support can be identified using the benchmark report. The benchmark report includes a recommendation with respect to additional instructional support. A sample benchmark report to the teacher for winter of kindergarten is illustrated in Figure 2. The benchmark goal for the middle of kindergarten is 25–35 correct responses per minute on OnRF. A student who achieves 25 or above typically does not require additional instructional support, and continuation of regular, good classroom instruction is recommended with benchmark assessment (three times a year). Students who perform below 10 on DIBELS OnRF and who are low on DIBELS PSF may require intensive instructional support to achieve the end-of-kindergarten step to reading outcomes. The DIBELS LNF measure provides an additional measure of risk. Students with scores on DIBELS LNF in the lowest 20% of students in a school or district are likely to need additional instructional support. Students who score between 10 and 25 on OnRF are judged to have emerging skills. Additional instructional support and more frequent assessment to monitor growth of skills are warranted for these students.

In the class depicted in Figure 2, Joseph and Tiffany have met the middle-of-kindergarten benchmark of 25–35, and both children are beginning to acquire skill in phoneme segmentation as indicated by PSF scores of 15 and 13, respectively. Additionally, Joseph and Tiffany are performing in the low-risk range on LNF as evidenced by percentile rankings of 66 and 85. Both Joseph and Tiffany are considered to be at low risk for the development of later reading dif-

Figure 2. Sample benchmark assessment report for middle of kindergarten, with recommendation for instructional support needed to achieve next early literacy goal

	Onset Recognition Fluency			Phoneme Segmentation Fluency			Letter Naming Fluency			
Student	Score	Percentile	Initial Sound Skill Status	Score	Percentile	All Sounds Skill Status	Score	Percentile	Risk Status	Instructional Recommendations Based Primarily on PSF
T., Sandra	9	4	Deficit	1	7	Deficit	8	13	At risk	Intensive support indicated.
R., Matrix	7	2	Deficit	1	7	Deficit	11	19	At risk	Intensive support indicated.
W., Halley	14	12	Emerging	2	9	Deficit	29	46	Low risk	Strategic support.
M., Latisha	19	22	Emerging	3	11	Deficit	35	59	Low risk	Strategic support.
A., Brandon	9	4	Deficit	3	11	Deficit	24	35	Some risk	Intensive support indicated.
R., Tiffany	42	86	Established	13	31	Emerging	48	85	Low risk	Benchmark.
M., Danielle	5	1	Deficit	14	33	Emerging	21	28	Some risk	Strategic support.
M., Joseph	38	75	Established	15	35	Emerging	37	66	Low risk	Benchmark.

ficulties, and the continuation of regular, good classroom instruction with benchmark assessment at the end of kindergarten is recommended. On the other hand, Sandra, Matrix, and Brandon scored below 10 on OnRF and also scored low on PSF in the middle of kindergarten. In addition, all three students achieved percentile rank scores in the at-risk range on LNF (below 20th percentile). Based on their performance, Sandra, Matrix, and Brandon may require substantial, intensive instructional support to achieve the end-of-kindergarten benchmark goal.

Danielle also scored below 10 on OnRF on this assessment; however, her scores on PSF indicate that her phoneme segmentation skills are emerging. Her percentile rank for LNF is in the some-risk range (28th percentile). Danielle may have difficulty achieving the spring early-literacy goal, and strategic instruction and assessment may be required. Hailey and Latisha also may need strategic instruction and assessment to achieve a goal of 35–45 on PSF by spring of kindergarten.

When extremely brief measures are used to obtain an indication of skills, alternative reasons for low performance must be considered. For example, students may have a bad day, be ill, be confused by the directions, or be uncomfortable with an unfamiliar examiner rather than have an actual skill deficit. For students whose skills *may* be a concern as indicated by performance on the benchmark assessment, validation of need for instructional support is the next step.

Validating Need for Instructional Support

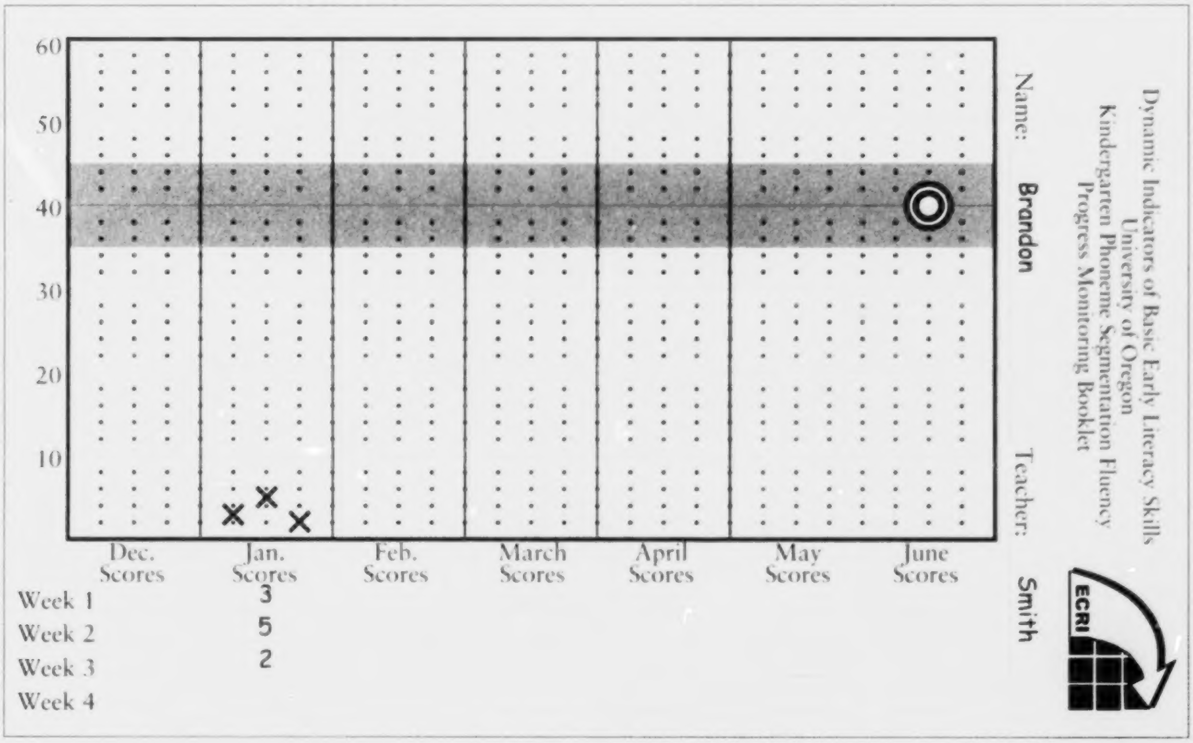
The next step in the Outcomes-Driven Model is to be reasonably confident that the student needs additional instructional support and that some other factor is not the reason for low performance. Several possible reasons might cause a student's score to be low on one sample of behavior at one point in time under one set of conditions. The student may be confused about the task, may be shy with an unfamiliar adult, may have had a bad experience on the playground before assessment, or may be recovering from an illness. In addition, we regularly encounter instances where a score was miscopied, entered incorrectly, or transposed. When considering a child's scores, it is important to consider first that the score might be inaccurate. The possibility of inaccurate scores is not unique to the DIBELS or CBM measures. Inaccurate scores are possible with any standardized assessment and may be more likely with younger children.

One important advantage of DIBELS and CBM over other standardized assessments is the ease with which a child's score can be rechecked. In the validating need for instructional support step, an examiner conducts brief repeat assessments of the target skill using alternate forms of the assessment under different conditions. The progress-monitoring booklet for each step includes alternate forms of the measure that can be used by any trained teacher to retest a child. Because assessments are each about 1 minute, and because each measure has over 20 alternate forms available, repeated measures for students of concern can be conducted with reasonable efficiency. By retesting students whose skills are of concern, we can increase our confidence that a low score is indicative of low skills rather than a bad day. Each retest examines a hypothesis about poor performance. If it seems plausible that a child was uncomfortable with an unfamiliar adult, the child can be retested with a familiar teacher or aide. If the child had a bad day or was sick, he or she can be retested another day.

A sample progress-monitoring booklet illustrating the teacher's decision that Brandon needs additional instructional support and that his initial low score was not just a bad day is illustrated in Figure 3. In the first week of January, Brandon was assessed with the rest of his school in the middle-of-kindergarten benchmark assessment (i.e., identifying need for instructional support). His scores of 9 on DIBELS OnRF and 3 on DIBELS PSF were a cause for concern for his teacher, Ms. Smith. Brandon did not meet the middle-of-kindergarten benchmark of 25–35 on OnRF, and his score of 3 on PSF indicates his phonological awareness skills are not yet emerging. Brandon's teacher wanted to make sure that his low performance on the 1-minute DIBELS measures was not simply because an unfamiliar person tested him right after the winter break. To validate the benchmark results, Ms. Smith personally retested Brandon with an alternate form of PSF before recess the following week and again with another alternate form after lunch the next week. Ms. Smith then examined Brandon's pattern of performance across the multiple assessments and concluded he was at risk for not meeting the end-of-kindergarten benchmark goal of 35–45 on DIBELS PSF and additional instructional support was warranted.

Three patterns of performance are possible on repeated assessments. First, if a child's scores are consistently low on two or three retests (five on OnRF) using different samples of behavior on different days under different conditions, the teacher can be rea-

Figure 3. Sample of repeated assessments to validate need for instructional support for Brandon



sonably confident the child's skills are low. Second, if only the initial testing is low, and the child consistently scores in the desired range on subsequent retests, the first assessment may have been inaccurate (i.e., the child was having a bad day). Third, the child may be extremely variable in performance: fine one day, but very low the next. In this case, we are alerted to other factors potentially affecting the child's performance. For example, an ear infection may negatively affect a child's hearing on some days but not others, or a child's motivation and effort may be inconsistent from one day to the next.

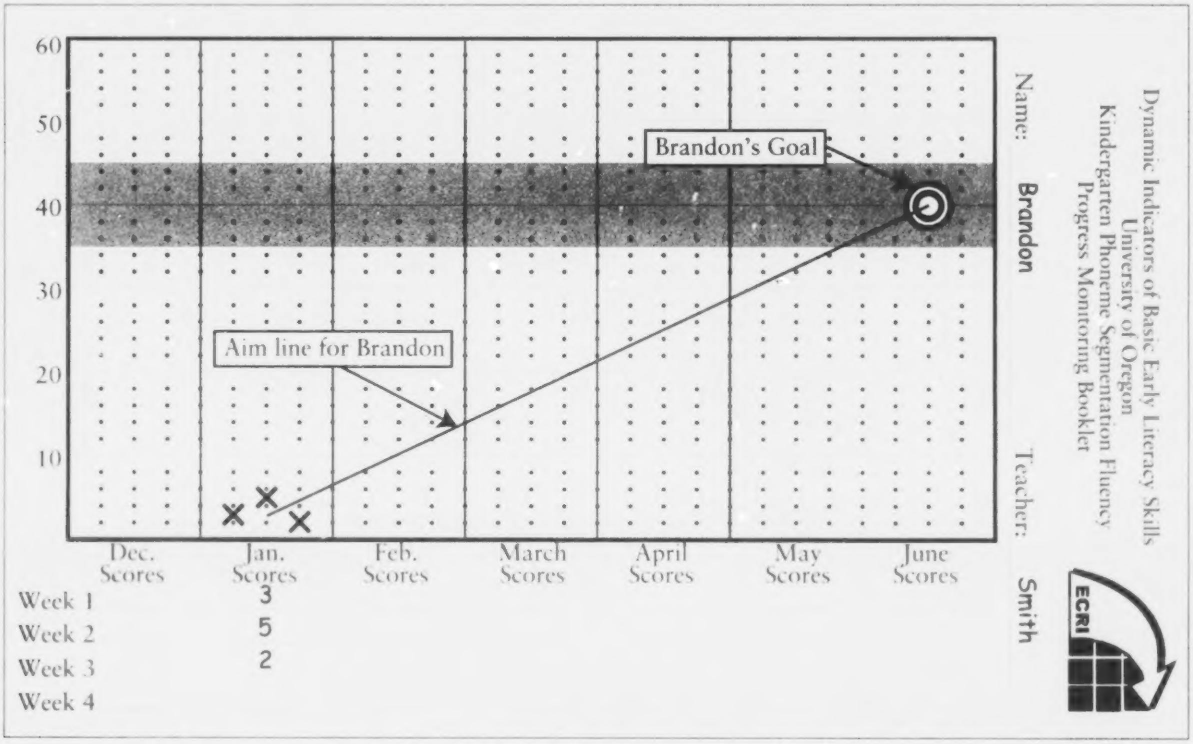
As illustrated in Figure 3, Brandon's performance on each of the retests on PSF was consistently low. Based on the repeated assessments, Brandon's teacher was confident that Brandon did have a deficit in phonological awareness and would benefit from additional instructional support to reach the next benchmark goal. The next decision-making step in the Outcomes-Driven Model is to plan instructional support for Brandon.

PLANNING INSTRUCTIONAL SUPPORT

A plan for providing additional instructional support should include (a) a clear instructional goal that will be a step to outcomes for the achievement of reading, (b) a focus on essential skills that are big ideas of early literacy and reading, (c) a plan for the amount and type of support the student is likely to need, (d) a specification of the logistics of who will teach using what instructional materials, when and where, and (e) a measurement plan to evaluate progress.

For each step in the model, a benchmark goal has been established (Table 3) and validated (Good, Simmons, & Kame'enui, 2001; Good et al., in progress). Achievement of that goal is a step to reading outcomes. An example goal is illustrated for Brandon in Figure 4. If Brandon is going to achieve the next benchmark goal of 35–45 on PSF at the end of kindergarten, then he will need to progress along the aimline illustrated in Figure 4. The aimline provides a map of expected progress to be used to monitor growth and plan instruction from week to week. The

Figure 4. Planning instructional support for Brandon: Specifying a goal and aimline for satisfactory progress



goal and systematic progress monitoring assist in focusing instructional effort on the crucial big ideas with a sense of urgency.

Research-based interventions have been developed, published, and validated to provide additional instructional support for each of the foundational early reading skills for which there is a corresponding benchmark goal. Instructional supports may be considered as falling along a continuum ranging from broad-based supports designed to build the skills of many or all children in the class (good classroom instruction) to high-intensity, individual interventions. For example, in the area of phonological awareness, the Phonemic Awareness for Children (Adams, Foorman, Lundberg, & Beeler, 1998) and Ladders to Literacy (O'Connor, Notari-Syverson, & Vadesy, 1998) curricula are available for regular classroom instruction. The Phonological Awareness Training for Reading curriculum (Torgesen & Bryant, 1994) is available for small group instruction of students who are having difficulty learning phonological awareness skills. Other instructional approaches are available and have received commendation as effective and valid.

Teachers have a variety of choices of materials to match their instructional preferences. Characteristics of additional instructional support for students needing intensive and strategic support are depicted in Table 4. In addition to curricula, other characteristics of instruction that may vary to meet the needs of individual children include time, size of group, selection of examples, and amount of practice. As long as the instructional support is sufficient for the student to progress along the aimline necessary to reach the goal, the choice of instructional curricula and strategies is appropriate. To determine if the instructional strategies are appropriate, however, evaluation is necessary. It may be necessary to modify the instructional support provided.

EVALUATING AND MODIFYING INSTRUCTIONAL SUPPORT

A key part of effective instruction is the integration of an assessment-intervention feedback loop in which

Table 4. Characteristics of Instruction for Intensive, Strategic, and Benchmark Instructional Support

Instructional characteristic	*Intensive instructional support*	*Strategic instructional support*	*Benchmark instructional support*
Frequency of progress monitoring	One per week	One every 2 weeks or one per month, depending on level of concern	Three per year: beginning, middle, and end of school year
Time allocated to instruction	Benchmark instruction, plus 20 minutes four times per week in small groups, plus home practice and support; extra sessions as needed.	Benchmark instruction plus extra sessions as needed	Embedded throughout day and 20 minutes per day, 4 days per week
Group size	Additional support in small group of about three	Additional support in small group of about five	Whole group and small group
Sample Phonological Awareness Curricula	• PATR • DI Reading Scripts • Optimize • Take Home Phonological Awareness	Mixture of intensive and benchmark curricula matching student needs	• Phonemic Awareness for Young Children • Road to the Code • Ladders to Literacy
Selection of examples	Carefully designed examples following a designed sequence of skills that match student skills and understanding	Examples designed to match student needs	Broad range of examples designed to move group
Amount of practice	30–40 responses per minute; choral responding to increase engagement and opportunities to practice; mixture of group and individual practice	Mixture of intensive and benchmark activities matching student needs	10–15 responses per minute; group and individual practice embedded in class activities

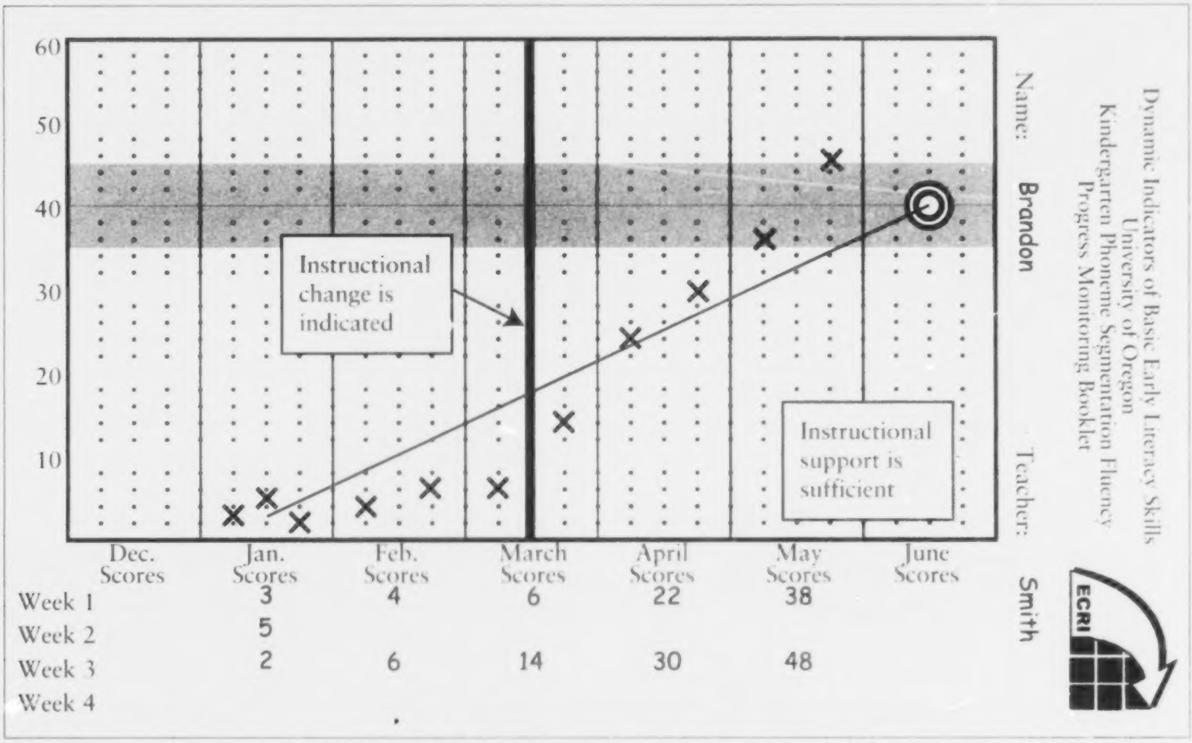
instructional support is evaluated and the instructional plan is modified based on student progress, until sufficient support is provided for the student to achieve the benchmark goal. A good plan is a powerful starting place for instruction, but an individual child's response to a particular curriculum or strategy is unpredictable. No matter how good the plan, if it is not supporting the student's progress toward the goal, it needs to be modified. The point of a formative evaluation of progress is to establish an assessment-intervention feedback loop whereby progress below the aimline triggers modifications to instruction, perhaps requiring additional time or resources or a different instructional approach incorporating more principles of effective instruction (e.g., Kame'enui & Carnine, 1998).

The first step in evaluating support is to establish a frequency of assessment to evaluate progress. For students who need substantial, intensive instructional support, weekly monitoring of progress is indicated. For students who need less support, less frequent monitoring (e.g., monthly) is sufficient. The next step is to establish decision rules to use to evaluate the data. Fuchs and colleagues recommend using a goal-oriented rule that is straightforward for teachers to understand and use (Fuchs, 1988, 1989). Student scores are plotted on a graph and compared to the aimline. When performance falls below the aimline on three consecutive points, instructional modifications are warranted (White & Haring, 1980).

Figure 5 illustrates the step of evaluating and modifying instructional support for Brandon. Because of her concern about Brandon's progress, his teacher assessed Brandon's skills bi-weekly on PSF. Using the progress-monitoring booklet for PSF, Ms. Smith administered a PSF probe to Brandon using alternate forms every other week and plotted his performance on the graph.

Small-group instructional support was begun for Brandon in the beginning of February. After 6 weeks of small group instruction, the teacher had three additional PSF scores. Brandon's performance continued consistently below the aimline. Ms. Smith decided the small group instructional support was not sufficient

Figure 5. Evaluating and modifying instructional support for Brandon



for Brandon to achieve the benchmark goal for PSF by the end of kindergarten. She then modified Brandon's instruction to provide additional modeling, examples, and practice. In the following weeks, Brandon's performance climbed above the aimline, indicating he was on track to achieve the end-of-year benchmark for phonemic segmentation. Toward the end of May, Brandon achieved the kindergarten benchmark goal on PSF.

REVIEWING OUTCOMES

In the Outcomes-Driven Model, the bottom line is achievement of essential literacy outcomes. The purpose of the reviewing-outcomes step is to review the structure of supports the school has in place to achieve outcomes at both an individual-student level and at a systems level. For *individual students* the teacher must decide if the student has achieved the benchmark and no longer requires additional instructional support. The benchmark assessment data for each benchmark goal can be used to answer this question using the same procedures as in identifying need for instructional support. For Brandon, the final data point in Figure 5 corresponds to his end-of-kindergarten benchmark score. Brandon's score of 38 in May of kindergarten indicates he has achieved the benchmark goal. Brandon will continue to be assessed in the fall, winter, and spring of first grade to ensure that he stays on track to achieve the subsequent benchmark goals at the middle and end of first grade.

Systems-Level Decision Making

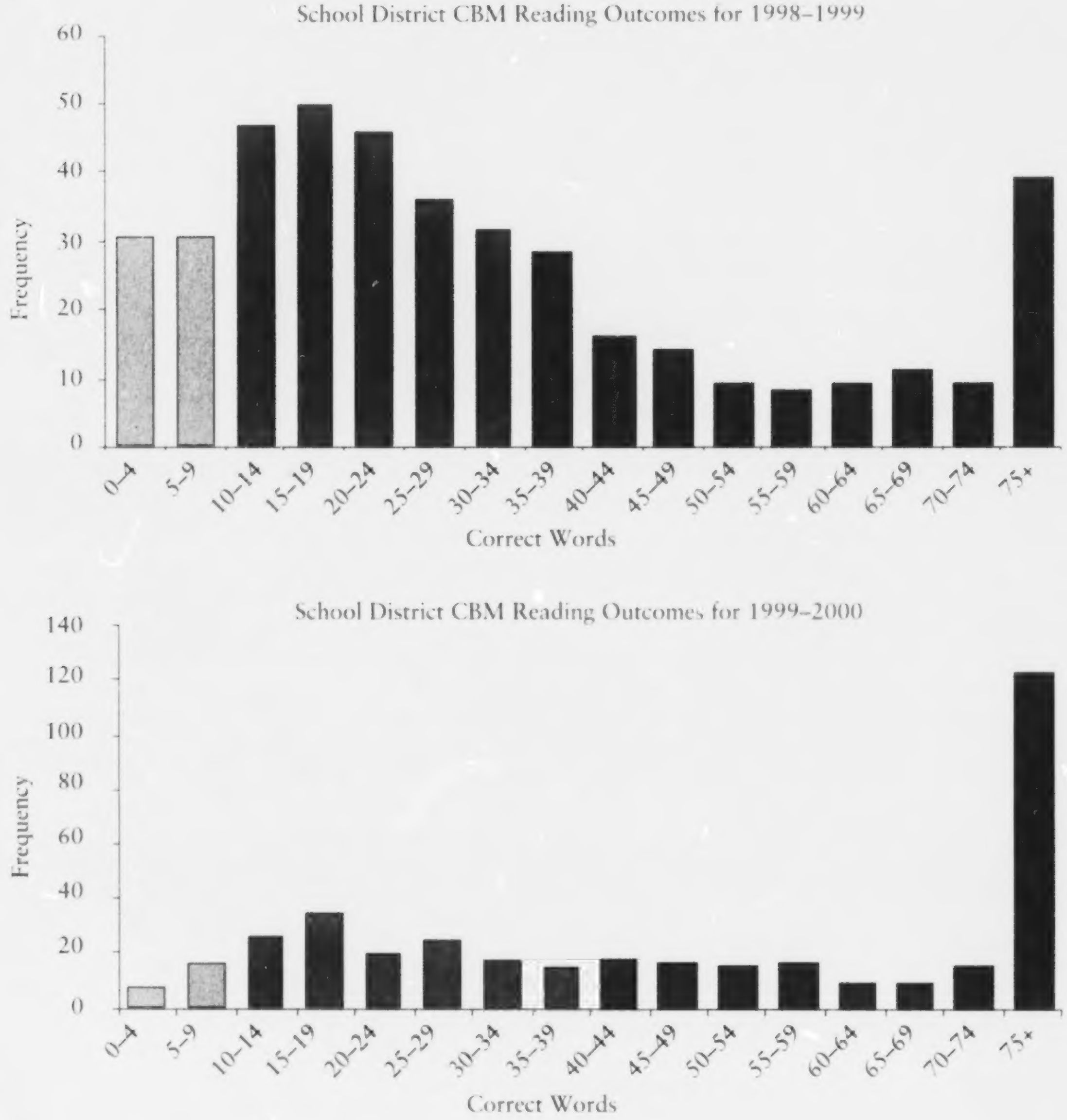
At a *systems level*, a review of outcomes and the structure of instructional supports should address the overall effectiveness of curriculum and instruction in supporting *all* children to achieve important reading outcomes. A first concern is the core curriculum and instruction that serves as the educational foundation for the school. A rough rule of thumb is that the core curriculum should support about 80% of students to achieve benchmark goals. However, some students will need additional instructional support. About 15% will need specific targeted instructional support on areas of specific difficulty. Another 5% will need very intensive, carefully designed instruction to achieve benchmark goals. The educational system should have (a) an effective core curriculum and instruction, (b) procedures to identify students who need additional instructional support, (c) a mechanism to deliver additional instructional support (time, personnel, curriculum, space), and (d) procedures to escalate the amount of instructional support if needed to achieve benchmark goals. Two sections of the DIBELS reports assist in reviewing the system of core instruction and additional instructional support to students: (a) outcomes report and (b) benchmark linkage report.

The *outcome report* assists a district in reviewing outcomes at the systems level by providing a clear, vivid, bottom line assessment of outcomes. The outcome report addresses the question, *What percent of students achieved essential reading outcomes?* A school or district should have a clear and vivid goal and should review from year to year its effectiveness in achieving the goal. A school district distribution from an outcome report is illustrated in Figure 6. On the horizontal axis are different levels of reading skills, and on the vertical axis is the number of students who achieved that level of reading skill. The solid bars represent students who achieved the reading outcome goal. The striped bars and dotted bars represent the students whose achievement was below or severely below the district goal.

For example, the district whose outcomes are illustrated in Figure 6 has the goal that all students will be able to read 40 or more words correct per minute on CBM reading passages. At the end of the 1998–1999 academic year (top of Figure 6), 28% of students in the district had achieved that goal. In the 1999–2000 academic year, the district focused considerable effort on district-wide educational reform, including (a) the use of DIBELS and CBM in an Outcomes-Driven Model, (b) review and adoption of improved core early literacy instructional curriculum in early grades, and (c) targeting at-risk children and providing additional, effective, instructional support early. At the end of the 1999–2000 academic year, the district achieved the first-grade reading outcomes illustrated in the bottom of Figure 6. The number of children achieving the reading goal had doubled, to 54%. The number of students who were reading below 10 correct words per minute was cut to less than half of the previous year, to 6%.

The school district in Figure 6 concluded it was moving in the right direction and had made real and meaningful progress toward the district goal. Further

Figure 6. First-grade reading outcomes for a school district for the 1998–1999 and the 1999–2000 academic years



improvement in outcomes was still necessary to achieve the district goal of 100% established readers at the end of first grade. The outcome report assists in keeping a focus on the bottom line but provides limited assistance in figuring out the precise step in acquisition of early literacy skills where students are experiencing difficulty, and whether the core curriculum or additional instructional support systems are in need of modification. Additional information about each step in the acquisition of reading skills is available in the benchmark linkage reports.

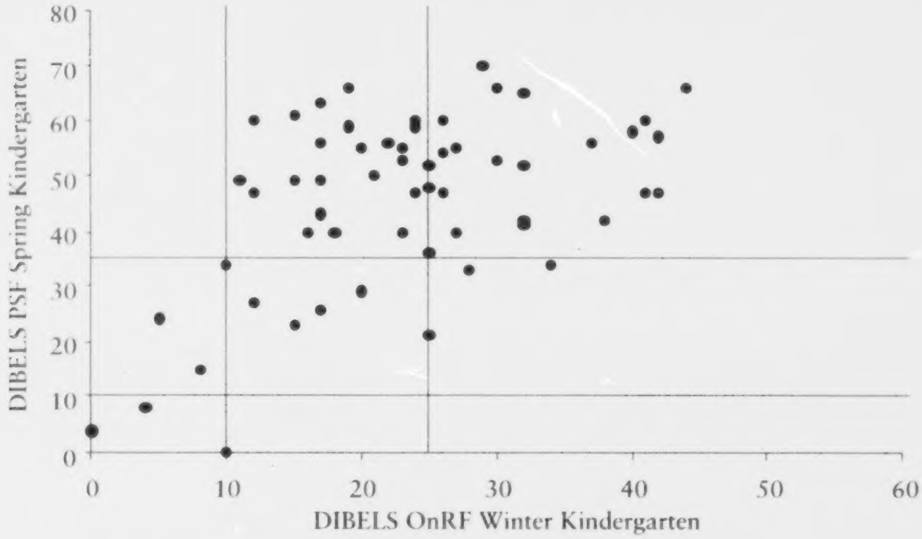
The second type of school report to assist a district in reviewing its system of instructional support is the *benchmark linkage report*. The benchmark linkage report is also provided for schools participating in the DIBELS Web (available to registered users at idea.uoregon.edu/~dibels/) data entry and reporting service. The purpose of the linkage report is to provide a picture of the connection between students achieving earlier benchmark goals and achieving later benchmark goals. The goal is to make clear to teachers the importance of each benchmark goal for *their students'* progress toward reading outcomes. If teachers want students to reach the spring-of-kindergarten goal, then one of the most important things they can do (in addition to teaching phonological awareness) is make sure all students reach the winter-of-kindergarten goal. The benchmark linkage report includes a "dot picture" showing student performance on an earlier benchmark and a later benchmark. In the sample dot picture illustrated in Figure 7, each student in a school is represented by a dot if his or her winter-of-kindergarten OnRF and spring-of-kindergarten PSF scores were available.

In addition to the dot picture, all teachers in the school receive a roster of their students and their scores, allowing teachers to associate a name and face to the dots representing their students. The vertical line at OnRF 25 indicates the winter-of-kindergarten benchmark goal of 25–35 on OnRF. Each dot on or to the right of the vertical line at OnRF 25 is a student who achieved the winter-of-kindergarten benchmark goal. The horizontal line at PSF 35 represents the spring-of-kindergarten benchmark goal of 35–45 on PSF. Each dot at or above the horizontal line at PSF 35 is a student who achieved the spring-of-kindergarten benchmark goal.

In School 1, 27 children achieved the winter-of-kindergarten benchmark goal. Of those 27 children, 24 children, or 89%, went on to achieve the spring-of-kindergarten benchmark goal on PSF. In other words, if students are strong and confident on the initial sound in words by the middle of kindergarten, then they are on track for learning all of the sounds in words. For students who meet the winter-of-kindergarten benchmark goal, their teacher teaches phonological awareness with the odds in his or her favor (89%) that their student will achieve the spring-of-kindergarten goal. Of course, meeting the winter-of-kindergarten benchmark goal is not a guarantee of continued progress. In School 1, three children (11%) who achieved the winter goal did not achieve the spring-of-kindergarten goal. Continued effort and vigilance are indicated to catch students early and provide additional instructional support if they are not making adequate progress.

Alternatively, students who have difficulty with the initial sound in words in winter of kindergarten are likely to experience difficulty mastering all phonemes in words by spring of kindergarten. In School 1, four

Figure 7. **Linkage between achieving winter-of-kindergarten OnRF benchmark goal and achieving spring-of-kindergarten PSF benchmark goal for School 1**



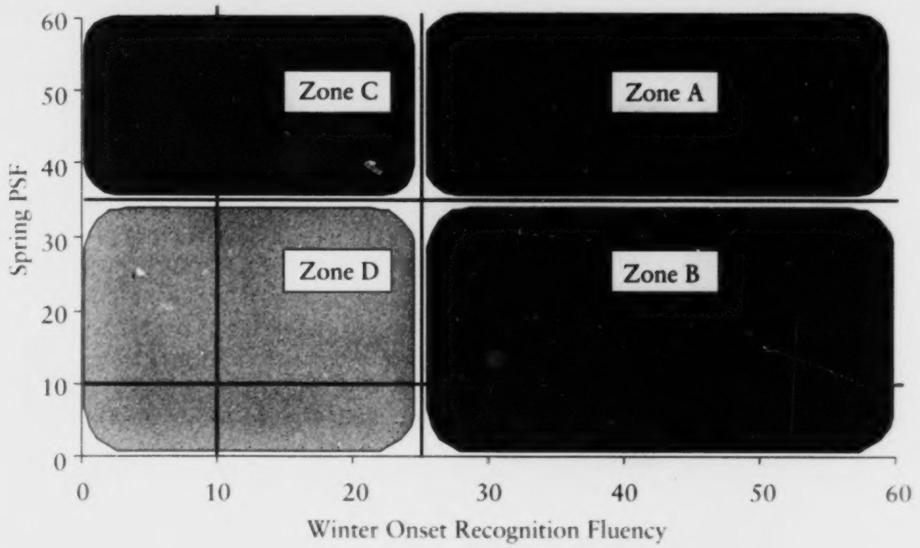
students scored less than 10 on OnRF in winter of kindergarten (i.e., their dot is to the left of the OnRF 10 vertical line), indicating significant difficulty with initial sounds in words. Of those four students, none (0%) achieved the spring-of-kindergarten PSF benchmark of 35–45. Meeting the winter benchmark goal puts the odds in the student's favor; deficit skills put the odds against achieving the next benchmark. In between the two levels (i.e., 10–25 on OnRF), a clear prediction is generally not possible.

Another purpose of the benchmark linkage reports is to provide information about the school's curriculum and instruction for a systems-level review of outcomes. When examining the linkage reports for a school, four zones of performance have instructional relevance (see Figure 8). In Figure 8, the linkage between OnRF in winter of kindergarten and PSF in spring of kindergarten is used for an illustration. A similar interpretation would be appropriate for each of the linked steps in the model. Zone A represents students who achieved the benchmark goal on an earlier skill at an earlier time (e.g., OnRF in winter of kindergarten) and who then achieved the benchmark goal on a later skill at a later time (e.g., PSF in spring of kindergarten). For each of the linkages examined, students in Zone A are progressing on a trajectory that predicts successful reading outcomes. Students who follow the Zone A pattern for each of the benchmark goals in the model of reading acquisition are on track for successful performance on high-stakes reading outcome measures. Thus, Zone A represents the desired pattern of performance and the goal of effective instruction.

The remaining three performance zones illustrated in Figure 8 provide information about students whose performance trajectories indicate weak "links" or instructional segments that may jeopardize successful reading outcomes. In some ways, instructing students toward reading outcomes is similar to running a relay race. Each leg of the race is critical to the overall outcome. If students pass from one benchmark goal to the next deficient in foundational skills, then the high-stakes outcome is jeopardized. A weak leg of the academic race can potentially be recovered with a strong compensatory later effort; however, prior research documents that the odds of this occurring decrease with time (e.g., Juel, 1988).

Students who are not in the Zone A pattern of performance have encountered some potential difficulty in their progress toward important reading outcomes. Students who achieved the earlier benchmark goal but who did not achieve the later benchmark goal would be plotted in Zone B. This pattern tells us the instructional advantage that was established ear-

Figure 8. Instructionally interpretable zones of performance for reviewing outcomes at a systems level in an Outcomes-Driven Model of the acquisition of early literacy skills and reading proficiency



lier was not sustained. Students who did not achieve the earlier benchmark goal but for whom a strong instructional effort was effective in achieving the subsequent benchmark goal are plotted in Zone C (see Figure 7 for an example). Finally, students plotted in Zone D did not achieve either the earlier or later benchmark goal. The reading progress of students in Zone D is not sufficient to make a confident prediction of reading outcomes. The likelihood of achieving reading outcomes decreases for students in the lower left quadrant of Zone D.

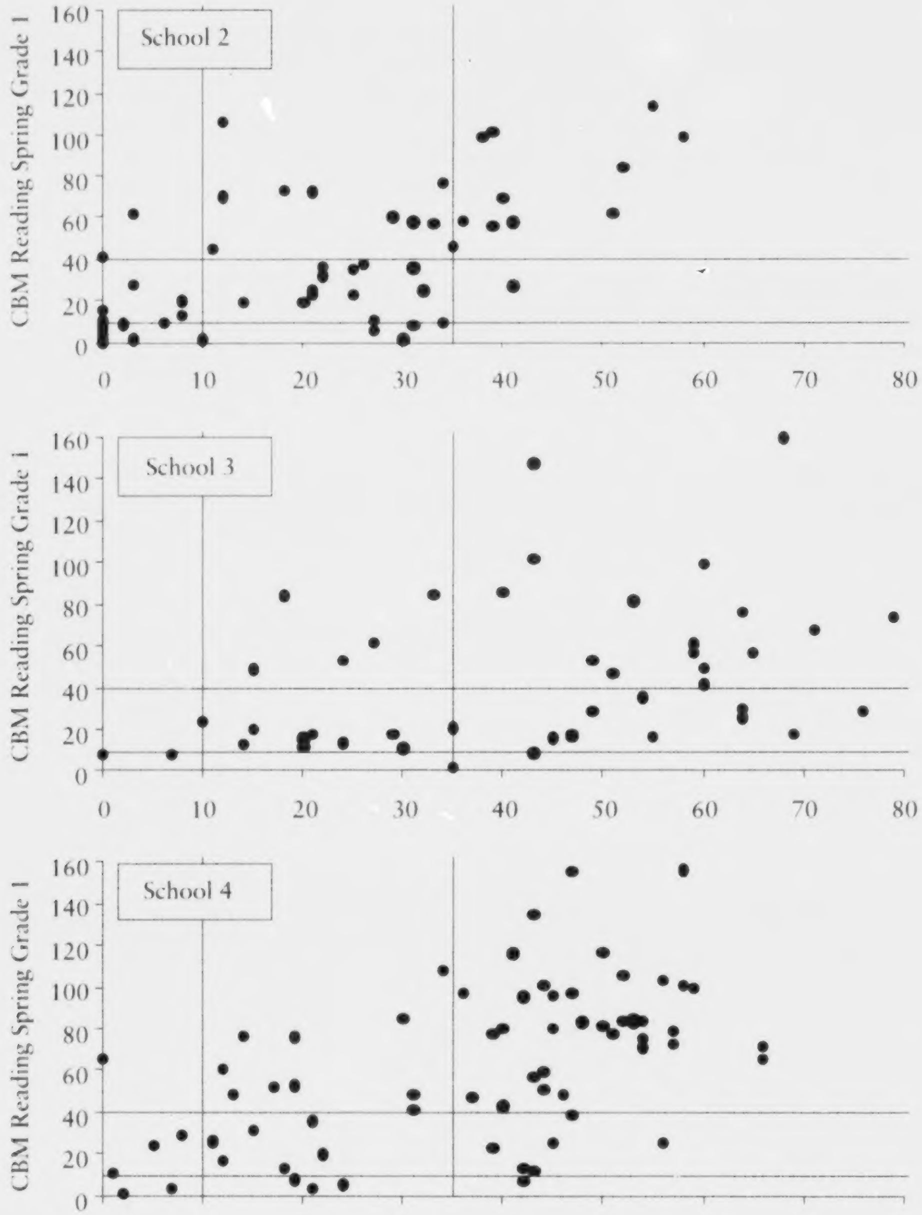
By reviewing the linkages from kindergarten through third grade, a school can identify strengths and weaknesses in their system of instructional support. If one or two students are in a zone of concern, a first question is whether they were having a bad day. Indeed, for any single student, a first hypothesis to be examined is if low performance was caused by a problem not necessarily related to low skills (e.g., uncomfortable with the tester). But, if there is a pattern of many students in a zone of concern, it is unlikely everyone was having a bad day at the same time, and more systemic explanations should be examined. A first systemic explanation to be considered is whether the integrity and standardization of DIBELS benchmark assessment procedures were sufficient to draw meaningful conclusions. Testing, scoring, and entering of scores into the DIBELS Web system should be monitored to make sure there were no points of confusion in administration and scoring procedures that would make the scores uninterpretable. However, once reasonable confidence in the scores is established, curriculum and instruction are the most important systemic factors to consider.

A striking feature of the DIBELS benchmark linkage reports is the school-to-school consistency with which meeting the earlier benchmark increases the odds of achieving the next benchmark. Equally striking are the school-to-school differences in the pattern of linkage from earlier to later benchmarks. Examining zones of performance in the linkage reports allows a review of outcomes with respect to: (a) the quality, focus, and intensity of the core instruction and curriculum and the system for providing additional instructional support *prior to* the first benchmark and (b) the quality, focus, and intensity of the core instruction and curriculum and system for providing additional instructional support *between* the first and second benchmark.

Each linkage between achievement of an earlier benchmark goal and achievement of a later benchmark goal can be examined in the same manner. For example, the linkage between spring-of-kindergarten PSF goal and the spring-of-first grade CBM reading goal is compared for three schools in Figure 9. Several important characteristics of each school's early literacy instruction and curriculum are apparent. First, many students (61%) in School 2 are not achieving the desired first-grade reading outcome. This is a clear signal that the school should examine its instruction and curriculum to identify ways to improve reading outcomes. Overall, the most students in School 2 were found in Zone D, indicating that they had not achieved either the spring-of-kindergarten goal or the first-grade reading goal. The reading growth and development of these students will be a serious concern for the school as the students move through subsequent grades (Juel, 1988, Good, Simmons, & Smith, 1998). The large number of students in Zone D is a signal the core kindergarten instruction and curriculum are not effective in supporting students to achieve the kindergarten goal, and is the initial cause of poor reading outcomes in first grade. For those students who achieved the kindergarten benchmark goal, the core first-grade curriculum and instruction were effective in supporting most students (92%) to achieve the first-grade goal. In other words, given students achieved benchmark in spring of kindergarten, the conditional percent of children who achieved the first-grade benchmark goal was 92%. Therefore, an important change for School 2 is to revise the core kindergarten curriculum and instruction to focus on phonological awareness skills and support all students to achieve the kindergarten benchmark goal in phonological awareness.

In School 3, the core kindergarten phonological awareness curriculum and instruction are more effective than School 2 in supporting most students (63%) to achieve the spring-of-kindergarten PSF goal. However, School 2 still needs a system to identify children who may need additional instructional support to achieve the goal and a system to provide that additional support. In addition, only half (55%) of the students who achieved the kindergarten PSF goal achieved the spring-of-first-grade reading goal. First-grade core curriculum and instruction must be reviewed to determine if more effective instruction or curriculum options are available.

Figure 9. Comparison of three schools' linkage reports for spring-of-kindergarten PSF and spring-of-first-grade CBM reading



In School 4, the most frequently occurring pattern of performance is Zone A (52%), with most students making satisfactory progress toward important reading outcomes. However, a substantial number of students are still not achieving the spring-of-kindergarten PSF goal in phonological awareness and the spring-of-first-grade CBM reading goal. Students who do not achieve reading goals in first grade are

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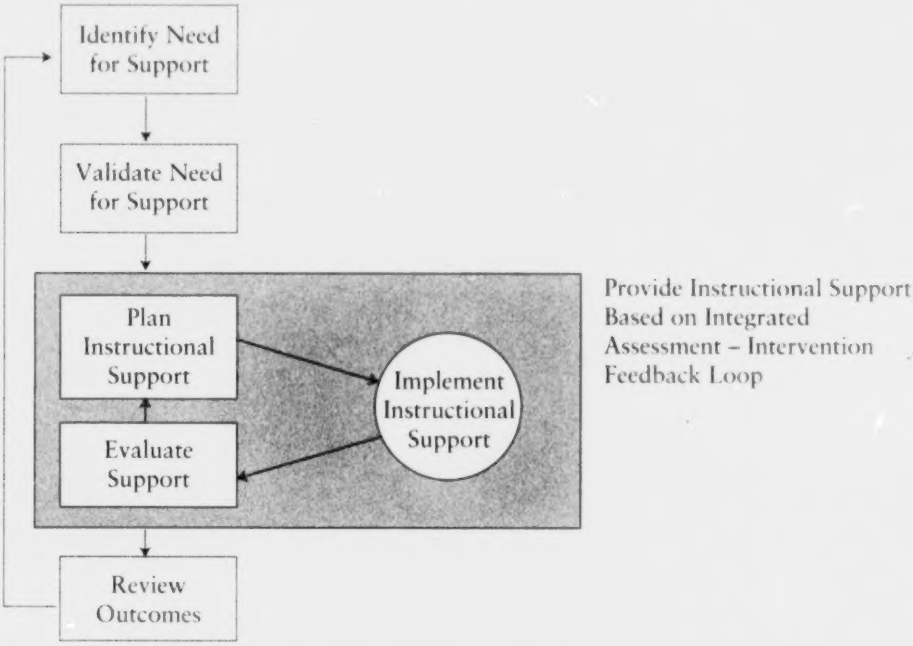
likely to continue experiencing reading difficulty (Good, Simmons, & Smith, 1998) and may require remedial or special education services during their school career. School 4 can benefit from improving its system for providing additional instructional support by identifying early those children who need additional instructional support, and by providing additional instructional support sufficient for all children (100%) to achieve early literacy benchmark goals.

DECISION LOOPS IN THE OUTCOMES-DRIVEN MODEL

The Outcomes-Driven Model is intended to be a continuous, recursive model with three primary decision loops. Completion of one cycle of a loop is intended to provide information to improve and refine the next iteration of the loop. The circular aspect of the Outcomes-Driven Model is depicted in Figure 10. The first decision loop is the assessment-intervention feedback loop described in the planning instructional support and evaluating and modifying instructional support sections. All too often assessment and intervention are treated as separate and unrelated activities. A premise of the Outcomes-Driven Model is that effective instruction incorporates an integrated, ongoing assessment-interaction feedback loop. Based on the student's progress toward an important goal, the instructional plan is changed, the implementation of instructional support is changed, the changes are evaluated, and the instructional plan is modified accordingly. The assessment-intervention feedback loop is satisfied when the student is making adequate progress toward the goal.

The second decision loop in the Outcomes-Driven Model is from one benchmark goal to the next for individual students. In the beginning of kindergarten, students who may need additional instructional support are identified, and sufficient instructional support is provided for the students to achieve the mid-kindergarten goal. The mid-kindergarten benchmark assessment of all students provides a basis to review outcomes of the instructional support provided and to identify students who may need additional support to achieve the end-of-kindergarten benchmark goal. In turn, the end-of-kindergarten benchmark assessment provides a basis to review outcomes and identify students who may need additional

Figure 10. Continuous feedback loops within an Outcomes Driven Model


Identify Need for Support
Validate Need for Support
Plan Instructional Support
Implement Instructional Support
Evaluate Support
Review Outcomes
Provide Instructional Support Based on Integrated Assessment – Intervention Feedback Loop

instructional support to achieve the mid-first-grade goal, and so on. The completion of each step toward literacy outcomes is the beginning of the next cycle of the Outcomes-Driven Model.

The third decision loop in the Outcomes-Driven Model is from year to year as outcomes of the instructional support system are reviewed and the system is thereby modified. This third decision loop is described in the section on reviewing outcomes at the systems level. Based on the review of benchmark linkage reports, for example, the school may decide a stronger focus on and more effort invested in early phonological awareness instruction, including initial sounds in words, is desirable in the first part of kindergarten. The school's early-literacy team might decide to adopt Ladders to Literacy (O'Connor et al, 1998) as a part of the core, early-kindergarten curriculum. Ladders to Literacy is an activity-based kindergarten curriculum that focuses on print awareness, oral language, and phonological awareness skills. The following year, the mid-kindergarten outcomes should be reviewed and compared with outcomes of prior years. Not all changes in curriculum and instruction are improvements. Educational reforms that improve outcomes and achieve goal levels should be maintained, reforms that improve outcomes but not enough to achieve goal levels should be strengthened, and reforms that decrease outcomes should be abandoned. It is reasonable to anticipate that achieving life-changing goals may be a multiyear process of improvement and refinement, but progress toward outcome goals should be apparent. It is not reasonable to take 7–10 years to abandon ineffective practices.

SUMMARY

This chapter has described best practice in assessment of early literacy skills using DIBELS and Curriculum-Based Measurement Reading within an Outcomes-Driven Model of educational decision making. The model is prevention-oriented and is designed to preempt reading difficulties and support all children to achieve adequate reading outcomes by the end of third grade. The model incorporates conceptual foundations regarding crucial early literacy skills for assessment and instruction and is focused on empirically validated outcomes for each early literacy skill. The model builds on reliable and valid measures of essential early literacy skills (DIBELS) to be used to document growth toward outcomes, as well as a set of steps for using the data generated by the measures at both the individual and systems levels.

The bottom line in the Outcomes-Driven Model is the achievement of crucial literacy outcomes for both individual students and systems at the classroom, school, and school district levels. The outcomes drive the decisions. If outcomes for individual children and/or groups of children are adequate, then the instruction and curricula are deemed to be adequate. However, if outcomes are not adequate, then a change is warranted. Changes that increase outcomes are maintained; changes that decrease outcomes are abandoned. Because data are collected on an ongoing basis documenting growth toward important benchmark skills, instructional and or curricular modifications can be made in a timely fashion to ensure all children achieve the goal of becoming established readers by the end of grade 3.

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AUTHOR NOTES

This research was supported in part by the Early Childhood Research Institute on Measuring Growth and Development (U.S. Department of Education H024360010). Portions of this chapter were published as a monograph for the Oregon School Study Council titled, *Using Dynamic Indicators of Basic Early Literacy Skills (Dibels) in an Outcomes-Driven Model: Steps to Reading Outcomes.*

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46 Best Practices in Early Literacy Skills

Ann Casey
Minneapolis Public Schools
Kathryn Howe
St. Croix River Education District

OVERVIEW

Reading is likely the most important skill educators can impart to their pupils. Yet, large numbers of students are experiencing difficulty in mastering this most basic skill. As many as 20% of elementary children have trouble learning to read (Shaywitz, Shaywitz, Fletcher, & Escobar, 1990), and as many as 60–70% of African-American, Latino, and English language learners experience reading difficulties (Moats, 1999; Snow, Burns, & Griffin, 1998). For children who live in poverty, the problem of learning to read well enough to comprehend content areas is exacerbated. With the recent emphasis on statewide accountability systems, this concern has become even more pronounced, especially in light of students who are unable to pass basic competency exams. Why are these students failing? Why have we been stymied in our ability to solve this problem? Clearly, there is urgency to the problem of reading failure. However, we will argue that this is a solvable problem if our resources are used wisely.

Unfortunately, the ongoing disagreement about how to teach reading has resulted in classroom practices that are often far removed from what the research literature supports as necessary components for an effective reading program. During the 1980s and into the 1990s there seemed to be a dichotomy between those who advocated teaching phonics and those who believed a whole language approach was best. However, this debate can be traced back at least as far as 1967 when Jean Chall published her first edition of *Learning to Read: The Great Debate.* Without reiterating that debate here, it is safe to say that most educators today tout a more "balanced literacy" approach. The balance must include, however, a code-emphasis (phonics) in beginning reading instruction and also include meaningful, interesting text.

During this same time period, considerable research was being published on the development of reading skills. Now, there is a preponderance of evidence about how reading evolves, why some children have more trouble than others, and what curriculum and instruction can remedy this situation. Unfortunately, pre-service teacher education does not necessarily prepare one to adequately address the needs of the students. And even when teachers have been well prepared, they often are not given the instructional tools and curriculum that will provide practice in the skills their students need most. Thus, part of the problem is that both teacher preparation programs and curriculum materials have not kept abreast of what current research identifies as the most effective methods to teach reading.

In the sections that follow, we will discuss important prerequisite skills for literacy, and the importance of identification and early intervention of at-risk learners. In addition, we will address specific instructional strategies as well as system-level issues such as curriculum adoption, service delivery, staff development and advocacy. School psychologists can use this information to have a significant impact on the early literacy practices that occur in elementary schools.

BASIC CONSIDERATIONS: WHAT ARE EARLY LITERACY SKILLS?

Language ability is one of the most important precursors to learning to read. The development of language and vocabulary is foundational and prerequisite to literacy development. Hart and Risley (1995) in their important study of parent-child verbal interaction patterns found vast differences in language development between middle class children and children from less advantaged backgrounds. Those differences can be attributed to tremendous differences in the amount and kind of talking in which these families engage. By the time children enter kindergarten at age 5, the trajectories for literacy development are already well developed. Many middle class children have had hundreds of hours of story book reading that has provided them the opportunity to expand their vocabularies, develop concepts of print (the knowledge that words we say are represented in print, and that words are made of letters, read from left to right, etc.), develop phonemic awareness (the knowledge that words are composed of individual sounds), as well as develop positive attitudes for reading in general. In sharp contrast, many children from less advantaged backgrounds may have had little if any exposure to books and fewer opportunities to converse with adults. Thus, the gap between the haves and have-nots in the skills necessary to develop literacy is large upon entering school, and only grows larger without significant explicit instructional intervention.

In the Beginning School Study, Entwisle, Alexander, and Olson (1997) found that rich and poor children learn equivalent amounts during the school year. However, children from middle class families learned more during the vacation periods while poor children's skills declined during vacations. Thus, the gap that existed on the first day of kindergarten is only exacerbated over time. Presumably, during vacation periods, advantaged children go to camp, take family vacations, visit museums and libraries, and generally have numerous enriching experiences, which contribute to expanded language and cognitive skills, while poor children may have none of those experiences. While encouraging to teachers who work in high poverty schools since it is validation of their efforts in teaching, it suggests that without significant early intervention, the learning gap will not be decreased.

Without good language development experiences, students enter school without a particular skill necessary for literacy development: phonological awareness. Phonological awareness is the knowledge that the words we speak are made of individual sounds and the ability to detect and manipulate these sounds (Blachman, 1991; Wagner & Torgenson, 1987). This is strictly an auditory skill without the visual representation of sounds (letters). Phonological awareness is a necessary although not sufficient skill for the development of reading (Adams, 1990a; Smith, Simmons, & Kame'enui, 2000). For skilled reading to develop, there are three important concepts or "big ideas" necessary for beginning reading instruction to be successful. These big ideas are (a) phonological awareness, (b) alphabetic understanding, and (c) automaticity with the code or fluency (Baker, Kame'enui, Simmons, & Stahl, 1994).

The research literature in support of those three areas as foundational for reading success is large. In particular, there are a number of intervention studies demonstrating a direct relationship between training in phonological awareness and reading acquisition (Adams, 1990a; Ball & Blachman, 1991; Cunningham, 1990; Lundberg, Frost, & Peterson, 1988). Alphabetic understanding is the idea that sounds are represented by letters (phoneme-grapheme relationship) and that those letters can be blended to form words. Children who have not had considerable exposure to print will not know what letters are and that they provide the key (code) to reading. This is something they need to be explicitly taught. Automaticity is perhaps less well understood but a necessary component to fluent reading. Clearly, the ability to rapidly decode letters into sounds and then words is the foundation of good reading skill. Without this ability, comprehension cannot fully develop for a number of reasons. When a student's excess attention is devoted to decoding, less attention can be committed to comprehension. Further, less fluent readers read fewer words, thereby decreasing their exposure to the entire story, which also limits comprehension.

Explicit instruction in phonological awareness, alphabetic understanding, and fluency building can reduce the gap that exists and grows in early literacy skills as children enter kindergarten and move through the primary grades. The issue then becomes which children need the explicit instruction. This will be discussed further in the assessment section.

It is important to note here that those prerequisite skills are necessary for any student who may be deficient in them, and not just children from disadvantaged circumstances. In the past, many reading problems were viewed as visual processing problems. However, the research literature today suggests that the vast majority of reading problems can be attributed to phonological processing deficits, rapid naming speed deficits, or both, which has been labeled the "double-deficit" (Wolf, 1999). Those twin deficits are similar to the "big ideas" mentioned above. Phonemic awareness is a-subskill of phonological processing. Rapid naming speed deficits are an indicator of problems in automaticity or fluency in decoding. These children also need explicit instructional intervention in early literacy skills. As Stanovich (1994) concluded, "That direct instruction in alphabetic coding facilitates early reading instruction is one of the most well-established conclusions in all of behavioral science"(p.285).

BEST PRACTICES

Assessment of Early Literacy Skills

Unfortunately, there are still many who believe that it is developmentally inappropriate to push reading on young children and that they will learn to read when they are ready. This belief, while well intended, is misguided and contributes to lack of early identification and intervention for children who are at-risk for reading difficulties. The International Reading Association and the National Association for the Education of Young Children (1998) issued a joint position statement on developmentally appropriate practice as it relates to reading and writing and clarified that for reading success we must start early. The National Institute of Child Health and Human Development (NICHD) had an even stronger caveat. "The concept of *developmentally appropriate* should not suggest delaying intervention, but using appropriate instructional strategies at an early age—especially in kindergarten" (Grossen, 1999, p. 5). If we had mandatory preschool education, this identification process could begin even earlier. Until such time when preschool education is more prevalent, we clearly have the appropriate tools for identification of at-risk students when they enter kindergarten. Kindergarten students identified with deficits in prerequisite literacy skills can then be provided the explicit instruction they need. If students are going to be fluent readers by third grade, then they need to be reading by the end of first grade, and in order to be reading by the end of first grade they need to work toward mastery of the foundational skills of phonological awareness, alphabetic understanding, and automaticity during their kindergarten year. To avert the Matthew effect (Stanovich, 1986), in which good readers become better readers because they read, and poor readers become worse readers because they do not read, intervention must start early.

A number of assessment tools now exist for the assessment of early literacy skills. Generally, there are two purposes for the assessment of early literacy skills: (a) identification of students at-risk for reading failure and (b) progress monitoring of students receiving intervention in early literacy skills. While there are commercially available measures, the focus of this discussion will be on other easily accessible measures. Yopp (1995) provided one of the first commonly available measures for identifying students with phonological awareness deficits. She developed a phonemic segmentation test, which was published in the *Reading Teacher*, and made it available to a wide audience. This measure is useful and continues to be widely used, although it measures just one of the several categories of phonological awareness. Adams (1990a) identifies five categories: rhyming, comparing and contrasting sounds, blending, segmenting, and manipulating phonemes. In designing a kindergarten/first-grade screening measure, however, most would agree that a segmentation test by itself would not be adequate and that other areas of early literacy should also be assessed. Further, in the fall of kindergarten, a segmenting task would be too difficult for many students, and therefore not discriminate well among those in need of intervention.

These additional areas might include letter names and letter sounds as well as some measure of print concepts. While knowing letter names does not directly translate to learning the code for reading, rapid letter naming (or letter naming fluency) is a measure of automaticity (Adams, 1990a) and likely results from repeated practice in phonological awareness and alphabetic understanding (Baker, et. al., 1994). Wolf, Bally, and Morris (1986, as cited in Wolf, 1999) found notable differences among entering kindergarten students in letter naming fluency. Further, they found that older dyslexic readers have significant deficits in letter naming fluency when compared to nondisabled readers. Thus, measuring one's ability to rapidly produce letter names is thought to be a good indicator of risk for reading failure, and a low score warrants further investigation of other early literacy skills.

The ability to produce letter sounds directly relates to sounding out words necessary for fluent reading to occur. Thus, students identified as knowing few letter sounds need direct instruction in letter sounds and the blending of letter sounds. For more in-depth assessment, one can assess a child's ability to manipulate speech sounds. The following tasks are purely auditory; therefore, we refer to speech rather than letter sounds. For example, the examiner says "Top. Take away the /t/ sound and add a /c/ sound." A phoneme deletion task requires skills such as, "Say *bat* without the /b/ sound." An oddity task is one where several words are said to the child (three that start with the same sound and one that does not), and the child is asked then to identify the word that has a different beginning sound.

Print concepts are the general understanding of how print is used and consist of tasks such as asking children to identify the front of the book, identifying the place where one begins reading, or pointing to a word. The California Reading and Literature Project has developed a Concepts of Print Survey (Adams & Treadway, 2000), although one can informally assess print concepts. Since many schools now use some type of kindergarten screening instrument, it is important that those screening measures include items that assess both print concepts and knowledge of letters and sounds. Together those skills will help identify students at risk for reading failure so they can be provided with the necessary intervention they need.

Since such assessment has high stakes (without early identification more children will likely fail to learn to read), those measures need to have a high degree of reliability and validity. Perhaps the most comprehensive assessment in this area is the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). The DIBELS consist of four measures that encompass both rate and skill: (a) phoneme segmentation (total number of segments produced in 1 minute; e.g., cat = /c/, /a/, /t/), (b) onset recognition fluency (number of pictures identified correctly in 1 minute; e.g., which picture begins with the /m/ sound), (c) letter naming fluency (number of letters named from a sheet in 1 minute), and (d) nonsense word fluency (number of letter sounds in CVC nonsense words blended correctly in 1 minute). The DIBELS have strong evidence of both reliability and validity (Cornachione & Wolter, 2000; Kaminisky, 2000; Kaminsky & Good, 1996). For more information about DIBELS, refer to their homepage at http://idea.uoregon.edu/~dibels/.

The DIBELS can be viewed as a downward extension of oral reading fluency measures such as those advocated by Deno (1989) and colleagues. Initially, the University of Oregon researchers were looking for one simple measure that could be used as an indicator of risk; however, they found there is a progression of skills development with onset recognition mastered before segmentation, and segmentation mastered prior to nonsense word fluency (Kaminsky, 2000). Once students have mastered nonsense word fluency or the ability to blend sounds, they should be reading, and progress monitoring can switch to Curriculum-Based Measurement (CBM; words read correctly in 1 minute). Stated another way, using CBM as your only assessment in first grade initially would result in a floor effect where the majority of first graders could not read or read very few words. However, by the end of first grade, CBM will differentiate students, but then precious time has been lost for intervention for the students who are not yet reading.

On the basis of the data collected, University of Oregon researchers have established kindergarten and first-grade benchmark goals by using DIBELS measures (Kaminisky, 2000). If these benchmarks are achieved, then there is a higher probability that the goal of successful reading by the end of first grade will be met. These benchmarks are as follows:

1. 25–35 correct per minute (cpm) on Onset Recognition Fluency by winter of kindergarten

2. 35–45 cpm on Phoneme Segmentation Fluency by spring of kindergarten

3. 40 cpm on Nonsense Word Fluency by winter of first grade
4. 40–60 cpm on reading CBM by spring of first grade

In addition to those benchmarks, Letter Naming Fluency is a general risk indicator and should be administered in the fall to both kindergarten and first-grade students.

The DIBELS provides a system for assessing and identifying students early who are at-risk for reading failure. Students who need support can be identified early and be provided with the amount and kind of support they need for those foundational skills to develop.

Curriculum and Instructional Interventions

The purpose of teaching students to read is to ensure they have access to the wonderful world of literature, to enhance their education, and to use reading in their daily lives. To read well, students have to process every word on every page with such speed and lack of effort that their attention is freed to understand the vocabulary and concepts in the text. The ability to sound out new words accounts for about 80% of the variance in first-grade comprehension, and continues to be a major factor in text comprehension as students progress through the grades (Foorman et al., 1997). Most young children comprehend vocabulary, semantics, and syntax at a much higher level than they are able to recognize words (Beck & Juel, 1995). The job of early literacy instruction, then, is to teach children to decode so their skill at recognizing printed words catches up to their skill at understanding spoken words. Although both decoding and comprehension skills must be developed, decoding skills take a top priority in the early years.

There appears to be a tight timeline during which beginning reading skills must be mastered. In fact, evidence is amassing that suggests that students who are not established readers by the end of the primary grades have only a slight chance of ever being competent readers (Juel, 1988; Lyon, 1998). Happily, research is converging on the elements that must be in place in early reading instruction. The convergence is so strong, in fact, that we can now say that if we combine research-based elements of instruction, 90–95% of our current poor readers can become average readers (Lyon, 1998). This is extraordinarily good news! It is also a major challenge.

Once the child arrives in kindergarten, we are working against the "tyranny of time" in which intervening early is our only opportunity to reduce achievement gaps (Kame'enui, 1993). Kindergarten and first-grade teachers and parents have less than 2 years to ensure that the student becomes a reader by the end of first grade. The second-grade teacher is in the important safety net position. We know the most important thing we can do is to give the student the skill to identify words. Weakness in decoding skills may be the most common and most serious source of reading difficulty (Adams, 1990b).

INSTRUCTIONAL DESIGN

Teaching children beginning reading skills so they master and retain the skills requires combining carefully sequenced content with excellent instructional design. We need to be extremely specific and redundant about instruction in order to reach the 30–40% of children who have not been learning to read in recent decades. See Kame'enui & Carnine (1998) for a thorough discussion of validated features of instructional design.

Unfortunately, most of the basal reading curricula currently in our schools neither use research-based design principles nor present the research-based sequence of skills that children need to master to learn to read. It is imperative, therefore, that school psychologists understand how reading instruction must proceed so that deficiencies in reading programs can be compensated for or, better yet, more adequate reading programs can be adopted.

ESSENTIAL COMPONENTS OF EARLY READING INSTRUCTION

For this discussion the three "big ideas" in beginning reading—Phonemic Awareness, Alphabetic Understanding, and Fluency with the Code—will be broken down even further into seven components: (a) phonemic awareness, (b) letter/sound correspondence (the grapheme, phoneme connection), (c) regular word blending (blending two or more letter sounds to make a word), (d) reading in connected text (reading words in passages to gain meaning), (e) irregular word identification (reading words that do not conform to phonetic patterns, or reading words with phonetic patterns that have not been taught yet), (f) advanced word identification (reading words with more complex phonetic constructions such as CVCe and vowel team words), and (g) fluency in reading (the ability to read accurately and quickly). Those components are stepping stones in the journey from non-reading to reading. They form a map that allows teachers to look at individual students and assess where they are on the continuum and which instruction would be most appropriate for them at which time.

Phonemic Awareness. Again, phonemic awareness is the awareness of the sounds of language and the ability to manipulate those sounds. Between the beginning of kindergarten and the end of first grade, children must master the following Phonemic Awareness skills:

1. Group words with similar and dissimilar sounds (mat, mug, sun)
2. Blend and split syllables (/f/ oot), (onset rime)
3. Blend sounds into words (/m/a/n/ = man)
4. Isolate first sounds in words (rose)
5. Segment words as a sequence of sounds (fish has three sounds: /f/i/sh/)
6. Detect and manipulate sounds within words (take /s/ from sun, add /r/ to make run)

A child is in good position for formal reading instruction when, given a series of dictated three-sound words such as "dog," the child can respond to each with 35–45 correct word segments per minute (Kaminsky, 2000).

A series of teaching formats will help students gain these skills. For example:

1. "We're going to play a say-the-word game. I'll say a word slowly, and then you say the word fast."
2. Listen. (Pause)."iiiiffff. What word? (signal)."
3. Teacher repeats step 2 with four more words: sat, Sid, am, fit.
4. Teacher repeats the set of words until students can respond correctly to all the words, making no errors.

See Carnine, Silbert, and Kame'enui (1997, pp. 62-69) for further discussion and more teaching formats.

Several excellent curricula have been developed to help kindergarten and first-grade teachers teach Phonemic Awareness skills. Annotated in this chapter are Adams, Foorman, Lundberg, and Beeler (1997). Also see O'Conner, Notari-Syverson, and Vadsky (1998). Ball and Blachman (1991) present a powerful say-it-and-move-it phonemic awareness activity.

Letter-Sound Correspondence. By the end of kindergarten the child who is well poised to move into reading can pronounce 40–50 correct letter sounds in 1 minute (E. J. Kame'enui & D. C. Simmons, personal communication). The basic instructional format for teaching letter sounds is as follows:

1. "Listen. I'll point to this letter and I'll say the sound. I'll keep saying the sound as long as I touch it. /aaa/." (Model)
2. "Say the sound with me: /aaa/." (Lead)
3. "Say the sounds yourself." (Test)

Once students can identify the sound of the letter on two successive trials, include the new letter-sound correspondence with 6–8 other known sounds. When the student can identify 4–6 letter-sound correspondences in 2 seconds, include those letters in single-syllable, CVC, decodable words (Carnine et al., 1997, pp.71–80)

In letter/sound instruction, care should be taken to model the sounds correctly without distortion and to give a great deal of practice with corrective feedback. Students should master each set of letter sounds before being asked to move on, and a distributive review cycle should be used to build retention.

Word Blending. Students should begin to blend words as soon as they have developed awareness of the phonemic structure of words and knowledge of the association of letters to sounds. Students do not need to know all the letter-sounds prior to beginning blending instruction. They will, however, need explicit instruction and repeated opportunities to practice and receive feedback. The core activity in systematic explicit decoding instruction is blending single sounds into words (Moats, 1998). The teaching sequence is as follows:

1. Teacher writes "am" and "fit" on the board.
2. "Watch. When I touch a letter, I'll say the sound. I'll keep saying the sound until I touch the next letter. I won't stop between sounds."
3. Teacher touches under each letter for 1 to 1½ seconds and says sounds without stopping. "My turn to sound out this word. aaammm." (Model)
4. Teacher touches under each letter for 1 to 1½ seconds and says sounds without stopping. "Sound out this word with me. aaammm." (Lead)
5. Teacher touches under each letter for 1 to 1½ seconds. "Your turn. Sound out this word by yourselves." (Group Test)
6. Teacher calls on individuals to sound out words. (Individual Test)
7. Everybody, "What word?" Students say entire word quickly; that is, at a normal rate.

In word blending instruction, use only letter/sounds students have mastered. Begin word blending when students know four to six sounds. Once students can blend simple words, begin using those words in simple connected text. Review letter sounds before each activity, and include examples of all types of words students have learned in review word drills (VC, CVC, CCVC, etc.) (Carnine et al, 1997, pp.82–91).

Reading Connected Text. Do not assume that learners will automatically transfer from reading words correctly in lists to reading words in passages. When introducing passage reading, give students prompts and procedures for transferring word recognition skills to passages. The focus at this point is on accuracy with emerging fluency. Provide initial practice in text with only words students can either sound out or have memorized. Continue repeated opportunities to read words in situations where they can apply their developing phonics skills with high success.

Begin reading words in passages after students can read words in lists at a rate of one word per 3 seconds. At this point the prompts will look like the following:

1. Early prompt: "Figure out the word. Say the sounds in the word to yourself." Give 3, (eventually 2, then 1 to 1½ seconds) to think. Then clap or tap for the group to say the word out loud. This phase usually lasts 1–2 weeks.
2. Later prompt: "Each time I signal (clap or tap), read the words in the story the fast way." (Give about 1 second per word or pace yourself to the middle reader in the group.)
3. Provide repeated opportunities for students to read and reread passages to develop accuracy and fluency.

The Error Correction Procedure is

1. Allow the student to finish the sentence.
2. Have the group or the individual sound out the word.
3. Say the word at a normal rate.
4. Ask the student to return to the beginning of the sentence (Carnine et al., 1997, pp. 91–94).

Irregular Words. Irregular words are those that do not conform to usual conventions of spelling. Irregular words are also those that do conform to conventions of spelling, but have letter/sound correspondences that have not been taught to the students yet. The teaching format for irregular words is the following:

1. Tell the student the word.
2. Ask them, "What word?"

3. Have students spell the word.

4. Ask them what word they spelled.

5. Confirm the word by saying, "Yes _____."

Limit the number of irregular words taught. If students are confused, stop introducing words. Preteach words before they appear in passages and provide cumulative review.

The Error Correction Procedure is

1. "This word is _____." (Model)

2. "What word?" (Test)

3. "Spell ______."

4. "Read the sentence again." (Delayed Test) (Carnine et al. 1997, pp.109–113).

Advanced Word Recognition. In the very early stages of reading that we have been discussing to this point, students attention has to be drawn to individual letters, the sounds those letters make, and the way the sounds combine to make words. As competence in reading increases, students must learn to become automatic in recognizing words. There is considerable evidence that fluency develops as students begin to respond to patterns and process familiar letter sequences as units. This is the orthographic stage in which it is important for students to become aware of patterns of letters in words. A massive amount of exposure to words is required to develop this awareness. Some of the exposure can be through word lists, but a substantial amount should be in reading text that contains vocabulary controlled to provide repetition of familiar word patterns (Adams, 1990b; Ehri, 1991).

By the middle of the first grade we would hope a child has mastered all consonant and short vowel sounds, can blend CVC, CCVC, CVCC, CCVCC words, recognize a good supply of irregular words, and can read end of year first-grade material at approximately 20 words/minute. It is at that point that the child is ready to be introduced to the CVCe pattern. This is the sharp digression from what the child has been taught to this point. No longer does each letter make one predictable sound that can be blended. Now one letter can make two sounds, and one letter's job is not to make any sound at all, but rather to govern the sound another letter makes. It is important that teachers not underestimate the complexity of this change. Students must be given very explicit instruction and lots of guided practice with feedback in order to master this stage.

It is very common to find older remedial readers who are not fluent at this distinction. One can only wonder if the confusion would be as great if the students had received explicit instruction and sufficient practice when they were first introduced to this concept in primary school.

Introductory format for teaching CVCe words:

1. Explain and use examples to show that an "e" at the end of a word makes a vowel say its name.

2. Point to a word (CVC or CVCe) and ask, "Is there an 'e' at the end of this word?"

3. Point to the vowel. "So what do we say for this letter?"

4. "So, what is the word?"

5. Provide short mixed lists of CVC and CVCe words daily, giving lots of opportunity to respond with error corrections.

6. Use CVCe words in passages when students can respond correctly in lists for 2 consecutive days.

Discrimination CVCe format: Use this to see if students understand when to apply the rule.

1. Use similar CVC and CVCe words such as "hop" and "hope." Or "dim" and "dime."

2. Read the list twice. The first time the teacher gives all the prompts in the Introductory Format. The second time the teacher just says, "What word?" Students should master all lists; that is, be able to get all words right the first time.

3. Fluency with CVCe CVC distinctions should be well established by the end of second grade (Carnine et al., 1997, pp. 166–167).

A second advanced word recognition skill students must develop in the orthographic stage is letter combinations in words, such as th, wh, ee, ea, ou, ai, and aw. The goal, again, is for students to see the patterns and respond to them automatically. Effective teaching should be as follows:

1. Teach only one sound (the most common sound) per combination. (See Carnine et al. (1997, p. 162) for a list of most common sounds of letter combinations.)
2. Separate sounds that are auditorily and visually similar (oa, oi, oo).
3. Teach sounds that sound alike together (ai and ay, oy and oi).
4. Use the same formats as beginning letter/sound.
5. Do word drills using the regular word format.
6. In the first part of a word list, underline the word part the student is learning. Ask, "What sound?" "What word?"
7. In the second part of the word list do not underline the letter combination, but still ask, "What sound?" "What word?"
8. Use a carefully designed review cycle so letter sounds that were mastered are not forgotten (Carnine et al.,1997, pp. 161–166).

Advanced word recognition actually entails learning and responding automatically to phonic generalizations about letter patterns. Some educators, therefore, would suggest teaching students to memorize those generalizations. Research, however, suggests that rule memorization is not productive. There are several possible reasons for this. First, generalizations are not reliable and therefore are confusing to students. Second, students do not need to know the rule. Rather, they need to respond to words quickly. Giving the student repeated opportunity to respond to words with feedback can best do this (Adams, 1990b).

Fluency in Reading. The human brain has capacity for only a limited amount of attention. To accomplish high-level tasks, subordinate tasks must be overlearned to the point of automaticity. This means that if letter sound identification is slow, then word blending will be laborious. If word identification is slow and laborious, then it will demand a great deal of attention, and little attention will be left to allocate to the meaning of the text. At each stage of early reading, therefore, students must be encouraged to move from accuracy to fluency before moving on to the next stage (Juel, 1991; Samuels, 1979). Teaching of fluency should proceed as follows:

1. Be sure students are accurate. If students have error rates over 10%, then either move them to easier material for fluency training or delay it until reading is more accurate.
2. Fluency training should begin when students are reading 30–40 words/minute.
3. The role of the teacher is to provide a model of how fluent reading sounds, to structure the learning environment to ensure passages are of appropriate difficulty, and to provide feedback.
4. Begin with highly decodable text and move slowly to less controlled text. Also include words progressively more phonically and structurally advanced.

Continued Points of Debate in Early Reading Instruction

USE OF CONTEXT IN WORD IDENTIFICATION

It was once thought by expert reading researchers that good readers were fluent because they used context to predict words and thus were able to skip over many letters and whole words. It followed then that an important skill to teach poor readers was to guess what word would make sense based on pictures or the surrounding text. A preponderance of research over at least 15 years has shown that this belief and practice is not substantiated (Stanovich, 1994). While good readers actually look at every letter in every word, poor readers are the ones who rely on context clues for word identification. At this point we can only presume that this is because orthographic processing in poor readers is not adequately developed (Adams, 1990b).

There are a number of problems associated with using context clues for word identification. First, it is a form of guessing and therefore unreliable. Second, the less frequent words that a budding reader may need help identifying are content words that often carry the most meaning. The words surrounding those content words are likely to be structure words that offer little meaningful context. Finally, the act of guessing and moving on provides no incentive to study the word and its letter patterns. Thus, the student is no better prepared to identify the word the next time it appears. By getting the word quickly with context clues, the student actually misses out on the practice that would make the student a better reader.

CHOICE OF TEXT FOR BEGINNING READERS

The type of text that early readers should be given for instructional practice is a second point of debate. Some argue that predictable text that follows a pattern in which words can be anticipated or guessed is best. It does not limit the words that can be used, and yet it allows the child to read quickly and builds confidence. Research suggests that this is, in fact, valuable for preschool reading in order to build print awareness (Moats, 1998). Once actual word identification instruction has begun, however, this approach meets with the same objections as the use of context for word identification approach discussed above.

Others argue that words for beginning readers' texts should be chosen for the frequency of the use in the oral language of young children. This method allows for text that sounds natural to the child. Many high-frequency words, however, are irregular. Text reading, then, requires memorization of a large number of words as whole words. This method also makes it difficult for the children to see the connection between the phonics lessons they may be receiving and the text they are asked to read.

Still others in the reading community suggest that beginning readers should be given text with a high percentage of words that the student can identify, a few irregular words that they have memorized, and the phonics principles they have mastered to that point. By using a high percentage of decodable words, of course, limits the words that can be used and leaves decodable text open to the criticism that it is unimaginative and stilted.

Juel and Roper-Schneider (1985) studied 11 first-grade classrooms in one district. All the classrooms used the district's structured phonics lessons. The classrooms were then split. Half practiced reading in text that supported phonics lessons with decodable words based on principles the students had learned. Half read in text with words that were chosen for their high-frequency rather than adherence to phonics principles. By the end of the year the students who read in connected text with decodable words read significantly more words, and could identify more words that had not been directly taught. There is some evidence that the choice of early text might influence skill in reading at least as powerfully as the type of skill instruction. (See Adams (1990b, pp. 272–292) for a more thorough discussion of this topic.)

INTERVENING WHEN STUDENTS ARE NOT MAKING ADEQUATE PROGRESS

The best intervention is a well-designed and well-delivered reading curriculum in the first place. We now have converging research on the importance of reading skill to success in later life, on the critical nature of having reading skills established in the primary grades, on how to teach beginning reading, and on how to monitor each child's progress. To ignore this preponderance of evidence and not put it into practice because of a different set of beliefs or values is indefensible.

Despite this encouraging scenario, however, the battle is not entirely won. Children coming into kindergarten at-risk for reading failure are a fragile lot. Although many respond to good instruction and careful monitoring, there is still a small group of non-responders. The best interventions for those students are similar research-based activities but in smaller groups so students have more opportunities to respond and get feedback. For a discussion of this topic see O'Connor (2000). She concludes that for some of our more difficult students we will need to be prepared to do long-term interventions even as we improve instruction for all students.

Systems Level Issues in Beginning Reading

ADOPTING BEGINNING READING CURRICULUM

By now it is apparent that very systematic and explicit instruction in letters, spelling patterns, and words are critical if students are to move from being non-readers to being readers in the primary grades. It is imperative that educators not underestimate the complexity of the task. It is unreasonable to expect that simply teaching teachers about the elements of good reading instruction will result in children being well instructed. They cannot be expected to create their own materials. Therefore the adoption of a beginning reading curriculum that follows research-based reading principles is important. Adoption committees must look to see that phonics instruction is explicit rather that implicit, that use of context is not encouraged as a significant method of word identification, and that decodable text is presented that develops in the same sequence as the student's phonics skills. They should also determine if large-scale research has reported positive results for the curriculum. Three curricula that have documented student achievement through large-scale research include Direct Instruction (Reading Mastery), Success For All, and Open Court. The National Center for the Tools of Educators (NCITE) also has developed a *Consumer's Guide to Evaluating a Core Reading Program Grades K-3*. It can be obtained from their website at http://idea.uoregon.edu/~ncite/.

SERVICE DELIVERY

It is common for an educational team to design a best practice instructional plan for a child or school, but not implement the plan because of service delivery difficulties. Careful problem solving will be needed to surmount these barriers. What follows are service variables that can be altered for intervention purposes:

Grouping. It often may be necessary for students to be placed in homogenous groups based on skill-achievement level for at least a portion of their reading instructional time. Grouping allows for explicit instruction, in which skills are neither too difficult nor too easy and in which students get multiple opportunities to respond with feedback. Providing skill groups for students and keeping them flexible based on data that reflect student progress is a staffing and scheduling challenge to schools. Frequent skill measurement will make it clear when children need to move to different skill groups. School psychologists will need to provide problem-solving assistance to grade level teams as they learn to use data to group students.

Time for Team Review of Data and for Problem Solving. Grade-level teams should have time scheduled to meet regularly to make change decisions. Even schools that agree philosophically with grouping and scheduling for data review will have be creative to find the time to allow it to happen.

Extra Time for Instruction. A major way in which children differ in learning to read is in the number of repetitions they need to master skills. A school that meets the needs of all students will have a plan in place so children can get extra time on the critical skill of reading. This may mean having the child skip less critical instructional areas. It may also mean allowing staff time away from other duties.

STAFF DEVELOPMENT

Fulfilling the promise of teaching all but a small percentage of students to read well (Lyon, 1998) will require that teachers and administrators in our schools know and understand the complexity of teaching children about the structure of language. This would require knowledge in how children actually learn to read the words on a page. Unfortunately in many teacher education programs even the faculty needs much more grounding in the science and pedagogy of reading. School psychologists need to be aware that almost all teachers of beginning reading, classroom teachers and specialists, will have gaps in their knowledge base. In-service training efforts are needed to provide teachers the basics of research-based reading assessment and instruction. See Moats (1997) for a thorough discussion of this topic.

ADVOCACY

There is a convergence of research evidence around the development of early literacy skills. At this point, we know what skills are predictive of reading risk and we know how to reliably and validly assess these skills. Given that the data are overwhelming in terms of the types of instructional strategies young students need to be successful readers, it is disconcerting that the major curricula available in our schools do not provide kindergarten and first-grade teachers with the materials they need to teach early literacy skills. While most mainstream curricula have some lessons that focus on phonemic awareness, they rarely are explicit enough or emphasized enough to provide the kind of practice at-risk students need. Thus, to provide adequate support for these at-risk students, many of the interventions have to be added on.

There is a clear role for school psychologists in advocating for instructional changes for kindergarten and first-grade students who need more explicit instruction. This advocacy can occur at the building, district, and state levels. At the individual building level, school psychologists can generate interest around this topic by providing continuing professional development on the current knowledge base for early literacy. As an outcome of training efforts, school psychologists might recruit interested teachers in gathering and developing curriculum materials that address student needs and organize discussions about how instruction can be delivered to students in need. Further, school psychologists are the most likely candidates to organize school-wide assessments for kindergarten and first-grade students that would identify students for targeted early literacy intervention.

At the district level, school psychologists could play a number of important roles. As a member of a district curriculum adoption committee, a school psychologist could advocate that curricula be chosen based on empirical evidence for strong achievement outcomes and the inclusion of explicit instruction in letter sounds and sound blending. Curriculum adoption can be a highly political undertaking, and a voice for empiricism should be represented. A further role is to advocate for district-wide assessment of early literacy skills for entering kindergarten and first-grade students. Of course, assessment without plans for remediation of identified deficits is of no use to anyone.

Finally, there also may be a role for school psychologists at the state level. Advocacy can be focused either at the legislative or bureaucratic levels. A number of states have undertaken reading initiatives that have provided best practices guidelines. The National Center to Improve the Tools of Educators at the University of Oregon has developed a Policy Options handbook for developing a reading initiative (Carnine, undated). This is a great resource for gathering ideas about how a few other states have implemented state-wide reading initiatives. The main message must be this: There is a strong empirical base for the early identification of children at-risk for reading failure; there is a strong empirical base for targeted instruction in early literacy skills to change this trajectory and reduce reading failure; and without such identification and intervention, large numbers of students will continue to fail high stakes state testing resulting in students ill prepared for life in the twenty-first century.

SUMMARY

The last decade of research has strengthened the empirical foundation for the development of early literacy skills such that there is irrefutable evidence for how reading failure develops and methods for preventing it. In their recent report, the National Reading Panel (2000) came to some important conclusions about what is known based on solid research evidence:

1. Teaching children to manipulate phonemes in words was highly effective under a variety of teaching conditions with a variety of learners across a range of grade and age levels and that teaching phonemic awareness to children significantly improves their reading more than instruction that lacks any attention to phonemic awareness (p.7).

2. Systematic phonics instruction produces significant benefits for students in kindergarten through sixth grade and for children having difficulty learning to read (p. 9).

3. Guided repeated oral reading procedures that include guidance from teachers, peers, or parents had a significant and positive impact on word recognition, fluency, and comprehension (p. 12). Conversely, the panel did not find a positive relationship between independent reading and reading achievement.

Given this information, school psychologists need to advocate for appropriate curricular and instructional interventions for kindergarten and first-grade students and in preschools when the opportunity presents itself. This instruction should focus on direct and explicit instruction in phonological awareness, letter sounds and blending, vocabulary development, and fluency practice. Further, school psychologists can be instrumental in implementing school wide assessments of young students in early literacy skills, which are predictive of reading failure. These assessments can help identify those who will benefit the most from early intervention and prevention of reading failure. An additional role is to identify teacher training needs for delivering a quality reading program, and to arrange for training and opportunities for teachers to plan and collaborate with one another. Finally, school psychologists can increase their knowledge of specific interventions for at-risk readers in order to become better consultants to early grade teachers. In many ways, preventing reading failure is perhaps the best role of all for school psychologists!

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Best Practices in Developing Local Norms for Academic Problem Solving

Lisa Habedank Stewart
Minnesota State University Moorhead
Ruth Kaminski
University of Oregon

OVERVIEW

We compare ourselves to others and compare our students to their classmates everyday. Teachers typically are able to "rank order" their students and determine who has the highest academic skills, who has the lowest, and who is in the middle. As school psychologists we use tests and test norms to operationalize and objectify student comparisons. Norms provide a standard of achievement or performance of a particular group on a given task or test and are often used as the standard of comparison for a student. An individual student's performance may be compared to a broad group of students or to a particular subgroup (i.e., students whose first language is not English) at a national, regional, or local level.

This chapter addresses the development of local norms; that is, norms that represent students from a particular educational system. Specifically, this chapter focuses on developing *academic* local norms for educational problem solving. Another chapter in this volume focuses on developing behavioral local norms. Local norms provide a standard for a student's performance compared to others in the student's own education cooperative, district, building, or even classroom. One of the advantages of local norms is the potential for a very specific and relevant comparison to other local students who share similarities in educational and other background variables. Local norms also present the opportunity to compare student skills against local goals or predetermined "benchmarks" and link normative data collection with other types of educational decisions. For the school psychologist, involvement in developing local norms provides a unique opportunity for leadership at the school or school district level while creating a database that has utility for everyday consultation and decision making.

The use of norms in the schools is not a new phenomenon. Since the early 1900s normative comparisons have been used extensively in the schools to describe individual differences (Bergan, 1985). These comparisons, typically involving published achievement and intelligence tests, have been used widely as part of the special education screening and eligibility process. The concept of local norms, likewise, is not new. Many psychological measurement texts describe local norms as norms developed by the test users themselves to represent a narrowly defined population. Some of the references to local norms in the literature describe norms developed on nationally normed, published tests in order to represent a specific population. For example, Tempest (1998) developed norms for the WISC-III on Navajo schoolchildren in a New Mexico county for the purpose of having a local Native American comparison as well as a national comparison.

Since the 1970s, an increasing number of school districts have created local norms to more directly represent the local population and local school district's academic goals and outcomes, rather than the performance of particular subgroups of students on items on a published test. For example, local norms have been developed using Curriculum-Based Measures (CBM) of student academic performance (Marston & Magnusson, 1988; Shinn, 1988). The normative data collected on these CBM tasks are used to describe the expectations for a student's basic academic skill performance in general education. Typically the norms are collected three times per year (fall, winter, and spring) using a sample of students from the local school building or district who complete CBM tasks tied to the general education curriculum. These norms can be used for several years as a comparison for students referred for screening, eligibility, or goal-setting decisions, with "renorming" taking place every 5–7 years (or more frequently as necessary if the student population demographics change) to keep the norms current.

As school districts have experimented with creating and using local norms, the types of tasks that are normed have broadened to include pre-literacy skills called Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Kaminski & Good, 1998) or the use of literature-based CBM reading probes (Hartman & Fuller, 1997). Additional uses of the local norming process and data also have evolved, such as collecting local norms on all students every year in a way that becomes incorporated into the school's normal operating procedures (Kaminski & Good, 1998; Shinn, 1998). In addition to providing a normative database for making decisions about referred students, having a regularly updated database on all students could be used (a) for reporting individual or group scores to teachers, parents or other agencies, (b) as a proactive screening tool to identify students who are not keeping up with peers or to some preset standard, or (c) to detect academic or behavioral trends over time. Although many of these expanded purposes are not norm referenced decisions, the steps for collecting the data are similar and often include developing local norms. This chapter will focus on the steps for developing local norms, but also will provide examples of expanded uses of that data collection process.

STRENGTHS OF LOCAL NORMS

Although developing norms does involve time and resources, the strengths of local norms can make this a wise investment. For most educational decision making, local norms are representative of a meaningful comparison group on tasks relevant to the problems at hand. Specifically, local norms may decrease the likelihood of bias and increase teaching/testing overlap and norm utility across educational decisions.

Decreasing the Likelihood of Bias in Decision Making

Local norms can decrease the likelihood of bias in decision making because they represent a meaningful comparison group. Local norms represent how a student performs in relation to others from his or her grade and school, a comparison likely to be representative of the age, grade, race, educational background, and geographic and socioeconomic factors relevant for educating this student (Shinn, 1988). Gerber and Semmel (1984) argue that general education teachers already use their own "local norms," where a student's performance falls in relation to the other students in the class, to determine who gets referred for more intensive services. Local norms make this comparison part of systematic and data-based decision making.

Local norms also can decrease the likelihood of bias in decision making because they promote the identification of educational needs and a problem-solving orientation. When education professionals base decisions on agreed upon, important educational outcomes operationalized in the form of locally normed educational tasks, they can identify and help students who perform significantly below their peers and thus are at risk for failure in the schools and in society (Shinn, Collins, & Gallagher, 1998). Although using local norms will not guarantee non-biased assessment or decision making, the process of creating and using local norms may help local schools and communities clearly communicate what is expected of students, identify current patterns of student performance, and make more objective and accountable the process of identifying students for special services or determining standards for student progress. Because local norms provide a snapshot of student performance on important educational targets across classrooms within a school and/or schools within a school district, local norms can even be used to demonstrate whether patterns of local performance are changing over time.

Opportunity for Greater Teaching/Testing Overlap

One of the complaints about the use of nationally normed, published tests is the lack of teaching/testing overlap. Several studies have documented that differing levels of test-content overlap with the curriculum affects student scores (e.g., Good & Salvia, 1988; Shapiro & Derr, 1987). Local norms give the school system flexibility for developing comparison data on educational outcomes and tasks that students have been exposed to in the school curriculum. Instead of making decisions based on questions that may or may not reflect content taught as part of the school's curriculum—and often assessed using bubble sheets or requiring a small number of responses—schools can base decisions about students on tasks related to curricular content. This flexibility means that the norm comparison data are directly relevant for making decisions about a student's performance compared to local expectations.

Utility Across Educational Decisions

Normative comparisons typically are used in educational decision making only to identify and describe the severity of a problem (e.g., for screening or eligibility decisions). A strength of local norms is increased utility across educational decisions. What national norm comparisons often lack is (a) the ability to consider the student's immediate environment in defining problems and (b) a tie between the information used to define the problem and other decisions in the public school system. Local norms operationalize the expectations for a student's immediate educational surroundings and can be useful across the range of educational decisions. They can be used to compare a referred student to his local peers for screening or eligibility decisions—perhaps in conjunction with national norm comparisons. However, local norms also can be used to identify students at risk for school failure, as a guide for setting educational goals, and even to help determine if a student is ready to exit special services.

A related strength of local norms is that all local educators can use the same general education outcomes "ruler" or decision-making framework for many types of educational programs such as Chapter I, English as a Second Language (ESL), Talented and Gifted (TAG), general education, and special education. Normative comparisons are already used to identify students for many types of educational programs. However, the tests used between and within these programs may differ, making it difficult to compare the achievement of one group of students (e.g., students served in Chapter I programs) to another (e.g., student identified as learning disabled with an Individualized Education Plan (IEP)). Local norms can provide a consistent general education outcomes ruler that allows for a variety of comparisons between and within all of an educational system's programs. Because school psychologists often see how decisions get made across a variety of programs, they are in a unique position to highlight the utility of local norms across programs.

LIMITATIONS OF LOCAL NORMS

Despite the strengths of local norms, several areas of caution must be kept in mind when developing local norms. It is important the local norms are not misinterpreted. It also is crucial that people developing and using local norms understand that although the local norms will reflect the performance of local students, "typical" performance for that district or building or classroom is not necessarily acceptable or ideal. School psychologists are in a unique position to model appropriate local norm use and interpretation and address any misconceptions regarding local norm data.

Misinterpretation

Because not all educators are familiar with the use of local norms, it is important to define both the sample and the measurement tasks. Parents, teachers, and others should be informed about who is represented in the normative sample, what the students were asked to do, and how the scores were derived. It would be important for accurate interpretation, for example, to know that a student's CBM reading performance was measured on reading passages from the general education curriculum at his or her grade level and compared to others at the same grade level in the school district.

Using local norms with a small number of cases in the norm sample (e.g., fewer than 100 students per grade) can be problematic. If the sample size is small, then the norm may be unstable and should not be used as the most important normative comparison for making eligibility decisions. Also, with a small sample size, infrequent elements in a population may not be represented. Small or limited sample size is not necessarily a problem, however, as long as the norm is interpreted appropriately. For example, if a classroom norm is used to help define what is expected of the student in that classroom, then a statement should be made about the possibility that expectations of student performance in another classroom may differ. This does not mean the classroom comparison is not meaningful; it may be quite useful in understanding the difficulty a teacher is having in accommodating a student's needs.

Local Norms and Defining Acceptable Performance and Curricula

Shinn (1988), in his description of developing CBM local norms for use in special education decision making, expressed concern that local normative performance would be seen as the goal for all students. Using a local norm to describe general education expectations does not mean that local normative performance is necessarily acceptable. For example, if a student's spring oral reading fluency is within the range of his third-grade peers—but his peers are reading a median of 20 words correctly per minute in typical grade-level material—the conclusion would be that the student is not different from peers. However, a reading level of 20 words per minute in third grade in typical grade-level material would not be an acceptable level of reading achievement for all third grade students. Rather than relying solely on local norms, empirically derived benchmark reading rates may be used as a criterion in conjunction with local norms to determine if a student's performance is acceptable. For example, Good and colleagues (Good, Simmons, & Kame'enui, 2001) have examined the utility of student performance on CBM reading in predicting reading success or failure on grade 3 high-stakes reading achievement tests and found that students who read grade-level material at a rate of 110 words correct per minute or better were likely to meet or exceed expectations on the Oregon Statewide Assessment. Students who were able to read fewer than 70 words correct per minute on grade-level material were not likely to meet expectations on the Oregon Statewide Assessment.

In addition to empirically derived benchmark criteria on local norm tasks, regionally or nationally normed general achievement tests may be used periodically to assess the skills of the local school population and provide data about how the school population as a whole compares to regional or national standards.

Another concern is that developing local norms will somehow advocate the use of a particular published curriculum. Local norms tasks should reflect important educational outcomes. The norming materials themselves may or may not be derived directly from the school's adopted published curricula. Having local norms drawn from published curricular materials does not mean that the adopted curriculum is the most effective, only that students are expected to learn from the adopted materials. Local norms will provide data on student's level of performance and rate of growth in the curricula.

BEST PRACTICES

Best practices in developing local norms for problem solving is based on how the norms will be used for educational decision making. The purpose(s) of norming for different educational decisions will influence the task of selecting important and valid behaviors to norm which, in turn, influence the following procedural steps of norm development: (a) selecting a level of norm, (b) creating a measurement net, (c) implementing a sampling plan, (d) collecting the data, and (e) organizing the data for use. Examples of the use of local norms for making decisions, the selection of important and valid behaviors to norm, and, finally, the step-by-step procedures of norm development will be presented in the following sections.

Uses of Local Norms for Decision Making in a Problem-Solving School System

Knowing how to use the local norm data requires an understanding of the problem solving steps and their relation to local norms. Deno (1988) proposed that educating tough-to-teach students is a problem-solving process. He outlined five problem-solving steps, or decisions, that correspond to the administrative steps of most special programs: (a) problem identification, (b) problem certification, (c) exploring solutions, (d) evaluating solutions, and (e) problem solution. In light of the recent emphasis on the importance of early intervention, however, another aspect of solving problems could be added to Deno's five-step process. Prior to the first step of problem solving could come problem prevention. Possible uses of local norms in each of these problem solving decisions, including prevention, will be outlined.

PREVENTION

Prevention efforts can be focused on all students or a subset of students who are at-risk for developing future problems. By using the norming process, data could be gathered on each student to determine if they are at-risk for later educational problems. This provides both a normative database and a way to screen and monitor students. With the emphasis on standards and accountability in many areas of the country, some districts have identified benchmark scores on the norming tasks based on research standards or analysis of their own norm data over time. Instead of waiting until a student is referred for special education, all students who are below these "benchmarks" based on their norming scores are monitored more closely, with additional services provided as needed. School psychologists could introduce or provide support for the use of local norms in this proactive, prevention-focused way.

One application of use of local norms form prevention based on benchmarks is systematic screening of all students at regular intervals using DIBELS. DIBELS include a series of pre-literacy tasks that build on each other and predict later reading success. By using the same time frame (e.g., fall, winter, spring) and basic steps as the development of local norms for older students, all kindergarten and first grade students could be tested on their development of these pre-skills (Kaminski & Good, 1998). For example, DIBELS data could be used to identify kindergarten students who are low in phonological skills. Those students could be monitored more closely and provided with instruction specific to their needs, perhaps changing the students' trajectories and preventing future referrals. In essence, using DIBELS local norms in prevention efforts takes problem solving to an earlier stage of skill development, aiding in the identification and treatment of pre-skill problems to prevent basic skill problems down the road.

PROBLEM IDENTIFICATION AND CERTIFICATION

Like national norms, local norms may assist in problem identification for a student referred to a school team for pre-referral interventions or problem certification for a student undergoing assessment for special education eligibility. Local norms can be used to define what is expected of a student. For example, comparing a student's score to a local oral reading norm can determine if the student's reading score falls within the average range of other students in that district, building, or classroom. That average range represents what the teachers see as typical reading performance in the classroom. If the student's reading falls below that average range, then educational personnel may conclude that the student's performance does not meet expectations and therefore a problem exists that warrants a pre-referral intervention(s) and further assessment. If, upon further assessment, the student's reading scores continue to fall far below typical student performance, then the conclusion that the problem is important and warrants intensive school services (e.g., special education) is supported.

EXPLORING AND EVALUATING SOLUTIONS

Local norms can be useful at several other levels of a school's problem-solving framework. Once the problem has been validated, goals are set and services are provided to meet the student's needs. Local norms can be used to help set goals. IEP and Chapter I goals, for example, can be based on the typical performance of students in the local norm sample. Tying student goals to typical general education performance reminds teachers to strive for student success in the general education curriculum. Once goals are set, the student's individual progress is monitored at regular intervals and the trend line is compared to his or her goal to determine if services are effective. Services are modified if goals are not being met. Although local norms cannot be used for frequent individual progress monitoring, they can provide guidance in goal setting and encourage the use of data-based decision making.

Local norms also can be used to clarify placement in, and organization of, the variety of special services available in the school. By obtaining a picture of the local student population's range of skills (the local norm) and knowing which sections of that population are served by the resources available (e.g., where students in Chapter I, ESL, special education, TAG, and at-risk programs perform on the norming tasks), decisions about services for individual students and the organization of programs can be more data based.

PROBLEM SOLUTION

Finally, local norms can be used in determining when a student can be exited from a program or moved to a less restrictive environment (i.e., problem solution or reintegration). Student performance within the range of typical general education students suggests consideration of exit from the special program. Relatedly, student performance within the range of the lowest achieving general education students in the classroom, school, or district sample could be used to determine when a student could be reintegrated into a less restrictive setting (Powell-Smith & Stewart, 1998; Shinn, Habedank, Rodden-Nord, & Knutson, 1993).

EXPANDED USES OF THE NORMING PROCESS

Other uses of the norming data collection process have evolved over time. The addition of prevention is one such evolution that promotes problem solving at an earlier point in time. Other expanded uses include the use of local norms for accountability and communication purposes or program evaluation. Individual, classroom, building, or district reports can be generated from local norm data. Local norm data can be used in report cards to show where the individual student stands compared to the majority of his or her peers on the norm tasks. Local norms allow a school or district to generate their own summaries, graphs, and tables that can be individualized for local purposes.

Local norms collected across years also can be used to evaluate program/curriculum effects, given fairly stable student populations and demographics. Likewise, local norms collected across years could be used to evaluate the effects of population or demographic shifts, given fairly stable service delivery systems and program/curriculum. Local norms collected for the purpose of program evaluation or other administrative purposes may require a higher level of expertise and a more standard set of tasks and measurement materials than local norms developed for student-centered decision making (Tindal, 1988; Tindal & Marston, 1990).

Selecting Important and Valid Behaviors to Norm

Once the intended uses of the local norms are clear, the next step is deciding what behaviors or educational tasks will be normed. Examples of local norms in the recent school psychology literature and in this chapter have been associated with CBM or DIBELS. Developing local norms using behaviors important in the general education environment could include other areas of assessment and norming tasks. For example, local norms could be developed on social behaviors (Canter, 1995), physical education skills, or secondary content areas such as social studies or science (Espin & Tindal, 1998). What is most important in making decisions about what to norm is that the data are relevant and valid for decision making.

CHOOSING RELEVANT AND VALID AREAS OF ASSESSMENT

To be relevant, local norm data must be related to important educational outcomes for students. Local norms in basic academic skill areas are a logical place to begin because these areas generally have been the most "important," well-defined, and accepted educational outcomes in our schools. The DIBELS tasks and the use of the norming process for prevention efforts also are tied to important general education outcomes, although the tasks may be predictors of that outcome (e.g., phonological skills and understanding letter/sound correspondence are predictive of reading) and reflect the fact that the expectations for students at the pre-literacy level involve a broad foundation of pre-skills needed for future academic success.

To be valid, local norm data must be reliable and accurate, have relatively normal distributions, and be sensitive to educational change. To increase the likelihood that a local norm has these qualities, tasks that are normed must have standardized administrations and scoring procedures, with proven test-retest reliability and content validity. To be useful in decision making, the norms must reliably differentiate students' levels of skill on the task (e.g., performance on the tasks needs to be relatively normally distributed). The further a distribution is from being normal, the more difficult it becomes to use the norm to set goals or determine if a student being assessed is different from peers. The tasks being normed also must provide enough opportunities for responses to show an increase when that skill is taught in the classroom.

The Use of CBM Tasks. It is a challenge to find measurement tasks that (a) fulfill the validity requirements, (b) are time-efficient and affordable, and (c) provide data tied to important general education expectations. This challenge is one reason that local norming in the basic skill areas developed in conjunction with CBM. CBM tasks have a database documenting their reliability, validity, sensitivity (Good & Jefferson, 1998; Marston, 1989), and relatively normal distributions in local norm data collection (Magnusson, 1986; Tindal, Germann, & Deno, 1983). Furthermore, CBM is not just a technology, but a measurement system designed for use in a problem-solving system. Using local norms to operationalize the expectations of the general education environment is one of the defining characteristics of CBM (Deno, 1985, 1986).

The Use of DIBELS Tasks. Based on the format and use of CBM in the areas of basic skills, DIBELS have been developed to assess the acquisition of early literacy skills prior to formal reading instruction and the development of reading skills. DIBELS have been designed to measure the "big ideas" of early literacy, that is, those early literacy skills that are supported by research as being highly predictive of and causally related to reading success—phonological awareness, understanding of the alphabetic principle, and accuracy and fluency in reading connected text. These early literacy skills are hierarchical in nature. Thus, achievement of phonological awareness skills in kindergarten is related to the acquisition of the alphabetic principle in the beginning to middle of first grade and to reading achievement at the end of first grade. Ongoing research on DIBELS documents the reliability, validity, and sensitivity of the measures (Early Childhood Research Institute, 1998, 1999; Kaminski & Good, 1996,1998). DIBELS are used by comparing the performance of an individual child or groups of children at the classroom, building, or district level to empirically derived "benchmark" goals at prescribed times in kindergarten and first grade. Achievement of benchmark goals on DIBELS has been found to increase the likelihood of becoming an established reader by the end of first grade.

Steps in Developing Local Norms

Once decisions have been made about what behaviors will be normed, a series of steps can be followed to develop the norms themselves. Those steps include (a) selecting a level of norm, (b) creating a measurement net, (c) implementing a sampling plan, (d) collecting the data, and (e) organizing the data for use (Shinn, 1998). The steps involved in developing local norms follow a logical sequence. Selecting a level of norm provides an opportunity for reviewing the purposes for developing the norm and the unique characteristics and needs of the local school(s). The completed measurement net is a blueprint for developing norming materials and forces the norm developers to closely examine the local curriculum content, instructional focus, and goals and expectations. The sampling plan identifies the students who will make up the norm sample and allows for logistical planning such as scheduling and final materials preparation. Normative performance data are finally obtained by collecting and organizing the data for use. Each of these five steps is an opportunity for school psychologists to play a leadership or collaborative role in norm development.

SELECT A LEVEL OF NORM

The three basic levels of local norms are classroom, school-building, and school-district norms. In each level the entire sample of students could be used, or a sampling plan could be used to test only a representative portion of students. Classroom and building norms are developed by testing students from an individual classroom or building, respectively. School-district norms can be developed in two ways: (a) selecting a sample of students in each grade from the entire school district population or (b) developing norms in each building and then aggregating all the building norms. The former is generally less expensive, but aggregated district norms provide the benefit of having both building and district norms available. Each level of norm has its own characteristics.

Classroom, Building, and District Norm Characteristics. Classroom norms are a simple way to get started and provide the most direct measure of what is expected of a student in his or her own classroom. However, with such a small norm sample, estimates of the variability within the classroom are problematic and stable percentile ranks cannot be developed. Classroom norms can be used in the referral or IEP process to identify problems and prioritize student needs. They are useful for setting goals for a student or group of students. For example, the goal for low readers in a class could be to perform within the typical range on spring reading norms by the end of the year. Classroom norms also have been used in determining when a student may be transitioned to a less restrictive environment, for example, from a resource room setting to the general education classroom (Shinn et al., 1993).

District norms, on the other hand, provide a more consistent estimate of the performance level and variability of the students within the district. The disadvantages of district norms are that they are a less precise measure of the least restrictive environment for a particular student (e.g., that student's classroom). District norms, like classroom norms, can be used to identify problems, set goals, and prioritize needs. If the district norm sample is 100 per grade or larger, then the norms are stable enough to be used in problem certification decisions as well. Aggregated district norms also could be used to compare the performance of students in different schools for resource allocation and system-wide programmatic purposes.

Building norm characteristics lie somewhere in between classroom and district norms. They are a more precise estimate of the least restrictive environment than district norms and provide a more stable estimate of performance than classroom norms. Building norms can be used for the same general purpose as district norms, including problem certification if the student sample has at least 100 students per grade.

Factors in Level of Norm Decisions. Important factors when selecting a level of norm are the (a) decisions for which the data will be used, (b) amount of curriculum chaos in the district, (c) political and economic structure of the area, (d) characteristics of the local population, and (e) economic and other resources available (Shinn, 1998). As alluded to in the characteristics of different levels of norms, these five factors must be considered and balanced in order to determine which level of norm is both meaningful and feasible.

The development of norms and the level of norm desired depend on the decisions being made. If the school wants to use the data for prevention, the level of norm will be determined in part by the scope of the prevention efforts. For example, one teacher can decide to use DIBELS to monitor pre-literacy development in his or her classroom or the entire district could be involved. If the school wants to use the data for problem identification, problem solution decisions, or goal-setting as part of evaluating solutions, then any level of norm may be appropriate, but the sample size needs to be kept in mind so that student comparisons are accurately represented. For example a classroom norm can be very useful for understanding a referral to the Teacher Assistance Team or making a decision about whether to reintegrate a student, but variations from classroom to classroom should be taken into consideration before interpreting results too broadly. For problem certification decisions it is often necessary to look at stable student samples, which typically requires district norms but may be possible with building norms if the building is quite large.

In some cases, the size of the district, and therefore the norm sample, may be too small for making stable interpretations. In small districts, it may be necessary to collect data across several years within the same district to get a population base of 100 students for a stable sample. Alternatively, two or more small districts with similar demographics may choose to collaborate on a norming project and merge data to achieve a sufficient population base for stable norms.

The other four factors in making a level of norm decision are also important. If the school district has a relatively homogeneous school population and curricular expectations, then district norms are appropriate. When the district is characterized by heterogeneous schools, such as schools that differ in terms of student's language, cultural, and/or socioeconomic backgrounds, district-only norms may not provide the most meaningful representation of student expectations. If the curricular grade-level educational goals or scope and sequence of instruction across a district are inconsistent, then district-only norms may not be appropriate. Schools that have different structures, get funded differently, or have a history of functioning independently from the district "norm" would warrant the development of building norms. If the funds or personnel are unavailable for district norming, then building norms may be more feasible. If resources for building norms are unavailable, then norms can be developed one classroom at a time.

CREATE A MEASUREMENT NET

The second step in developing local norms is creating a measurement net. A measurement net is a grid of the grade levels and representative materials used in norming. The materials should represent the domain of the school year curriculum and expectations for typical general education students. For example, if local norms are desired for mathematic computation at Snowshoe Elementary School, a measurement net could be developed that detailed the grade levels where a math norm comparison would be useful in decision making. At each of these grade levels, the mathematic operations and problem types that best represent student expectations at that grade can be determined and grade-level math probes developed. In the case of academic pre-skills, such as DIBELS, the measurement net would include the pre-skills students would be expected to master over the course of the year in order to be successful in the future. When completed, the measurement net provides a guide for the student stimulus materials that must be developed or obtained. A CBM and DIBELS local norm measurement net for pre-literacy and the four basic skill areas is presented in Figure 1.

It is important that the measurement net truly represent typical material and expectations in each area and grade, not end-of-the-year goals nor already mastered pre-skills. Not every skill or level of difficulty can be represented in the norm materials. Many people and resources may be used to operationally define "typical." District curriculum specialists, adopted curriculum scope and sequence charts, and teachers provide the resources for answering questions such as: *What skills and materials are most representative of each grade's goals and objectives?* or *What materials are the majority of the students placed in for most of the school year?* The actual norming materials can be drawn directly from the adopted published curricular materials identified as typical or can be generic materials created to reflect typical materials and expectations at each grade level.

Figure 1. Sample of DIBELS and CBM local norms measurement net: grades K–6

Grade	*Early literacy*	*Reading*	*Math*	*Written expression*
K	• Onset recognition (fall, winter) • Letter-naming (fall, winter, spring) • Phonemic segmentation (winter, spring)	—	—	—
1	• Letter-naming (fall) • Phonemic segmentation (fall, winter) • Nonsense word fluency (fall, winter, spring)	Scribner Level 1 (winter, spring)	Basic facts (+, -) Mixed probe (+, -)	—
2	—	Scribner Level 2 Common word list	Basic facts (+, -) Mixed probe (+, -)	Age appropriate story starters
3	—	Scribner Level 3 Common word list	Basic facts (+, -) Mixed probe (+, -, x)	Age appropriate story starters
4	—	Scribner Level 4 Common word list	Basic facts (x, /) Mixed probe (+, -, x, /)	Age appropriate story starters
5	—	Scribner Level 5 Common word list	Basic facts (x, /) Mixed probe (+, -, x, /)	Age appropriate story starters
6	—	Scribner Level 6 Common word list	Basic facts (x, /) Mixed probe (+, -, x, /)	Age appropriate story starters

Some hints for creating a measurement net will help avoid problems later. Field test materials and avoid material that is too easy (no variance) or too difficult (nothing to measure). Measurement nets should differ according to differences in the curriculum, purpose for norming and level of norming.

IMPLEMENT A SAMPLING PLAN

One of the strengths of local norms is that the data represent a meaningful comparison population: the students in the same school, curricula, age, grade, and geographical area as the student being compared. A local norm does not necessarily mean norming the entire population, however. It is usually much more efficient to sample from the local population. A sampling plan must be developed that balances the resources available, representativeness of the sample, and information desired. Keep in mind that if the information desired includes information on every student, then sampling is not an option! If the norming process is used for child find and prevention or for individual student reporting, then the school must have the resources and commitment necessary to collect norms on an ongoing basis and on all students. However, if the norming process is used for the sole purpose of collecting a normative comparison, sampling may be used. Options for sampling plans will be described below.

For classroom norms, a minimum of 7–10 students is necessary. Three methods of sampling students for classroom norms have been used: (a) creating a random subset of 7–10 students chosen from the entire class, (b) creating a subset of 7–10 students randomly selected from a pool of "typical" students identified by the teacher, and (c) a combination of testing all the students in the class for group administered tasks and selecting a subset of 7–10 students for more time-consuming individually administered tasks (e.g., oral reading). Choosing every *n*th name in the list from an alphabetized roster of student names or having a computer generated random selection of students are the most typical ways to obtain a random sample of students.

At the building level, 15–20% of the students at each grade level, with a minimum of 20 students per grade, should be randomly sampled (Tindal et al., 1983). If building-level percentile ranks are desired, then a sample of 100 students per grade is needed. Aggregated district norms can be developed by combining building norms if standard measurement materials have been used. If district-only norms are developed, then a random sample of 100 students per grade is needed (aggregating across years if necessary to get 100 students).

COLLECT THE DATA

Data collection begins once the foundation has been laid for collecting well-developed norms. Successful data collection hinges on the development of student testing materials, training data collectors, and scheduling when and where data collection will take place. Student materials need to be prepared that are clear and time-efficient, for example, in booklet form with a place to summarize the data on the cover. Data collectors must be recruited and trained. Getting people involved in the data collection can be a good way of making the data meaningful for them. Parent volunteers, teachers, aides, school psychologists, principals, and school board members can be data collectors. Training materials should be developed so data collectors leave training reliable and efficient in performing the norming administration and scoring procedures. Standardized administration and scoring, clear scheduling and materials, and monitoring integrity of data collection through spot checks or checklists also are key aspects in the collection of reliable norms.

The dates and logistics for norming must be scheduled as far in advance as possible to avoid conflicts with other scheduled school activities. To get a picture of student performance throughout the year, trimester norming (e.g., fall, winter, spring) is recommended, using equivalent but not identical norming materials each time (Shinn, 1988). Of course, classroom norms can be collected almost spontaneously if a classroom comparison is relevant to a decision being made and the materials and trained personnel are available. Norming can take place either within individual classrooms or at a central location in the school(s) such as a cafeteria or media center.

ORGANIZE THE DATA FOR USE

Because there are many potential uses for local norms and different consumers of norming information, the norm data need to be organized so they are easily and accurately interpreted. The data can be summarized at four different levels: (a) individual student raw scores; (b) classroom ranges of scores, medians, and rank orderings; (c) building-level ranges of scores, medians, rank orderings, and perhaps percentile ranks; and (d) school-district-level ranges of scores, percentile ranks, descriptive statistics, within-grade frequency distributions, and across-grade comparisons.

Pictures communicate more clearly than tables and lists, so graphs representing the data are highly desirable. An example of a tabular display of local norm data is presented in Figure 2.

Figure 2 presents a classroom norm rank order of the students by raw score and also gives the classroom range and median. Students in general education, Chapter I, and special education in reading are separated so that comparisons of the achievement levels of students in these programs can be made. Additional descriptive statistics such as group averages and standard deviations could be added to the table for building and district norms. Histograms or fre-

Figure 2. Sample classroom norms table

Wild Rice Elementary: Grade 5, Mrs. Hermenez
Grade-level passages: CBM oral reading words read correct per minute 9/27/00

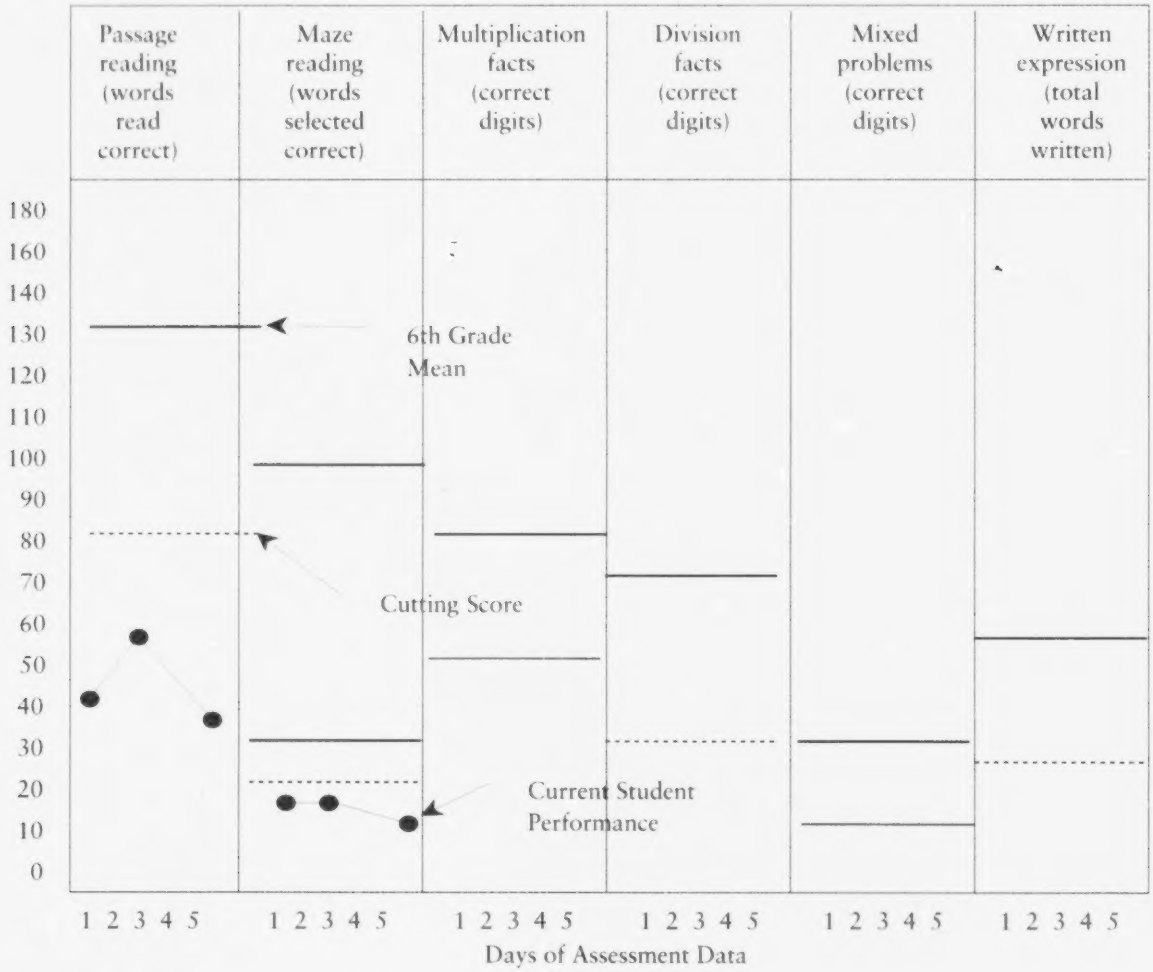
Student	*Rank order*	*Raw score*		
		General education	*Chapter I*	*Special education*
Bergstrom, Jolee	1	167		
Diaz, Angelica	2	164		
Sanchez, Jose	3	139		
Johnson, Jeff	4	134		
Mignon, Janice	5	129		
Meyers, Vincent	6	129		
Severti, Joshua	7	125		
Cooper, Jenell	8	122		
Longstocking, Thea	9	122		
Lefty, Isaac	10	119		
Rose, Concetta	11	111		
Dahlen, Meagan	12	109		
Logger, Pierce	13	105		
Hammer, Amanda	14		103	
Schwartz, Jeff	15	102		
McDonald, Ron	16	90		
Russell, Cameron	17	89		
Wilson, Bruce	18	88		
Homeschmidt, Justin	19	88		
Nymagen, Marta	20		87	
Cass, Clay	21	83		
Gleg, Glen	22	75		
Neak, Cale	23		73	
Schwartz, Debby	24	67		
Chew, Nathan	25		57	
Karrow, Sally	26			50
Carver, Zak	27		45	
Freemont, Scott	28			45
Diaz, Jake	29			23
Range:		Low score = 23; high score = 167		
Median		102		
General education median		111		
Chapter I median		73		
Special education median		45		

quency polygons can be generated to visualize the norm distribution so it is clear at a glance if the norm data have a relatively normal distribution or one that is skewed.

Percentile ranks are useful when making problem identification, certification, goal setting, and problem-solution decisions. For example, the district may determine that all students who are at or below the *n*th percentile on local norms are in need of further assessment, and students at or below the *n*th percentile are eligible for a particular program. An example of a district percentile rank cut-off chart is presented in Figure 3. In this case the percentiles are represented on a "cut-off" chart that provides a visual display of where a child's performance falls in relation to the local norm. The actual percentile cut-offs used by the district would be determined by considering several factors such as program intent, resources, federal or state guidelines, historical data, and so forth. Percentile rank data may be organized on tables by listing the raw scores and corresponding percentiles for each grade and norming task (Shinn, 1998; Tindal & Marston, 1990).

Percentile ranks also could be used to determine which score corresponds to the spring 50th percentile, and therefore what the goal would be for a student

Figure 3. District norm problem identification cut-off chart: grade 6 (fall)



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expected to be reading like an "average" student by the end of the year. A useful graphic for representing "typical performance" across grades is presented in Figure 4. The shaded bands represent performance between the 10th and 90th percentile at each grade level, with a line at the 50th percentile at each grade level. This same type of figure could be used to summarize typical performance within a grade across the three norming periods.

Individual student's data and goals can be superimposed on norm data. Figure 5 shows a student's DIBELS phonological awareness "initial sounds" score in September compared to (a) his classmates' scores and (b) research-based benchmark standards. The same figure also shows the goal that was set for the student for February and the aimline toward the goal that the student would need to approximate in order to meet the goal.

Many other types of graphs and tables could be used to organize and summarize the data; only a few of the possibilities have been provided. Regardless of the format chosen, however, having the normative data entered into a computer spreadsheet will make data presentation easier. Some type of computerized data organization and management usually is necessary for building and district norms, and desirable even for classroom norms data presentation. The programming and charting capabilities of spreadsheet programs such as Microsoft Excel™ or AppleWorks™ have been used to organize and summarize local norms data. Some districts and researchers have begun experimenting with collecting the data and providing reports via password-protected internet sites, but these procedures are still under development.

SUMMARY

Although the use of normative comparisons in the schools is common, developing and using local norms as part of a problem-solving system is still a relatively new area for school psychologists. A problem-solving system requires analysis of the educational context as well as the individual student. The context of the educational system—the class size, educational background, socioeconomic factors, student achievement levels, and so forth—will differ from district to district, school to school, and even classroom to classroom. For the school psychologist working with the staff and students in a particular system, local norms can provide a representative sample for local decision

Figure 4. District reading norm (winter): Across-grade distribution

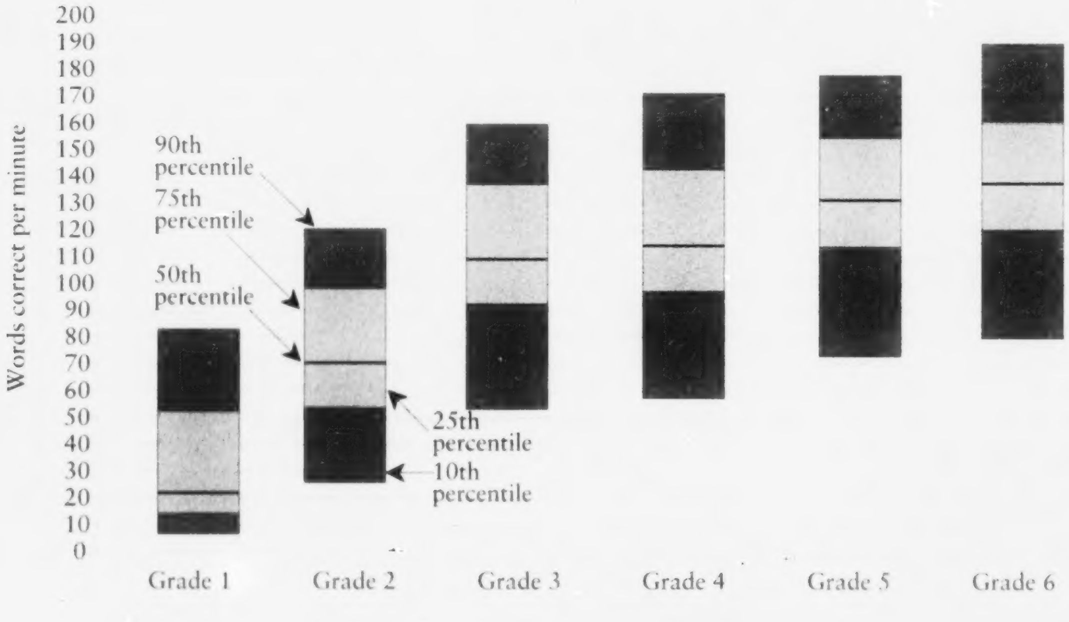
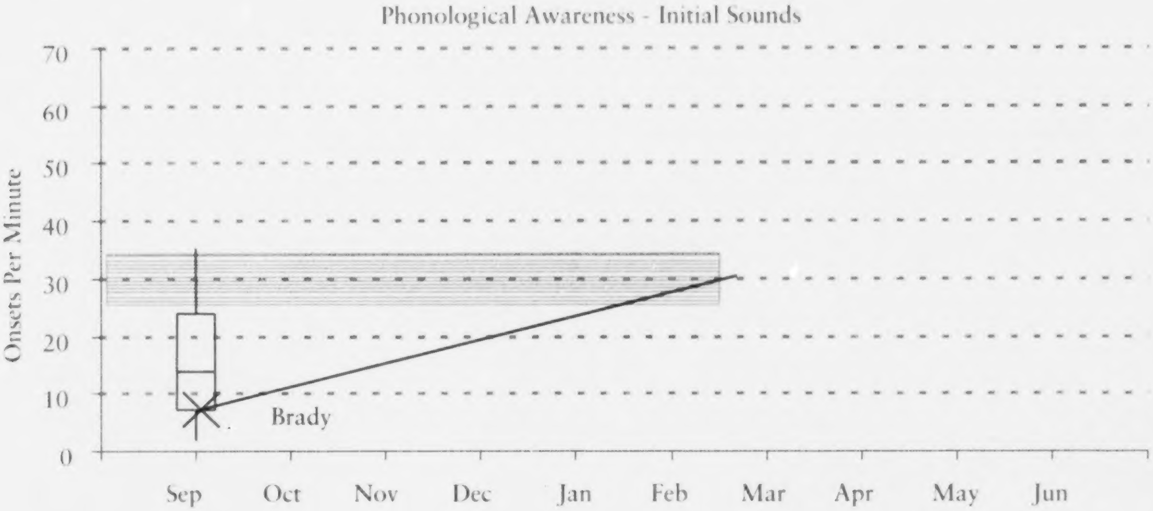


Figure 5. Phonological awareness district norm and benchmark area superimposed with individual student data (September) and goal



making and offer flexibility in which types of tasks are normed. These characteristics contribute to the strengths of local norms: decreased bias in decision making, increased teaching/testing overlap, and norm utility across educational decisions.

Developing local norms is a process of determining the purpose(s) for norm development, selecting important and valid behaviors to be "normed" and then implementing the five steps of norm development: (a) selecting a level of norm, (b) creating a measurement net, (c) implementing a sampling plan, (d) collecting data, and (e) organizing the data for use. School psychologists have the measurement, communication, and collaboration skills needed to facilitate these steps of local norm development and use.

Local norms can be used to help identify students at-risk of failure and then provide services that prevent problems from occurring. If prevention is not effective, then local norms can be used to (a) identify a problem by determining if a referred student's performance or behavior is outside of the expectations of general education, (b) certify a problem by showing whether the student's performance is so discrepant from peers that special services are warranted, (c) set goals to get the student's performance back within the range of his or her general education peers, and (d) determine when the student's performance is no longer outside of the general education expectations and the problem is solved. Throughout the prevention and problem-solving process, local norms provide a context for making educational decisions.

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This journal article describes the development and use of CBM local norms. Applying CBM local norms in special education decision making is presented as an opportunity to expand the role of the school psychologist. Technical adequacy and logistical issues in developing a local database are discussed.

Shinn, M. R. (Ed.). (1998). *Advanced applications of Curriculum-Based Measurement*. New York: Guilford.
This book provides updates on the use of CBM in the areas of pre-literacy (DIBELS), secondary education, assessment of minorities, reintegration, and much more. The chapters provide good background information on the use of CBM with particular populations or for a particular purpose and many chapters include examples of local norm development or the use of local norm data in decision making.

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48 Best Practices in Curriculum-Based Evaluation

Kenneth W. Howell
Special Education
Western Washington University
Sharon Kurns,
Heartland Area Education Agency 11
Lawrence Antil
Special Education
Western Washington University

OVERVIEW

Assessment and evaluation have traditionally been major components of the role of the school psychologist. As schools have engaged in reform efforts, this emphasis on assessment and evaluation and the need to involve school psychologists has not changed, but the types of assessments utilized and the way the information gained from these assessments is used has changed significantly. School psychologists are now being asked to participate in problem solving, analyze both academic and social problem behaviors, and assist in making instructional recommendations based on assessments they have completed.

As schools move from traditional systems of determining placement and services to systems with a problem-solving or solution-focused orientation, the use of functional assessments that can be administered efficiently and then directly linked to instruction is required. To meet these new demands, many school psychologists are seeking the tools and training necessary to analyze problem behaviors and link this analysis to the most appropriate intervention.

In the 1980s Curriculum-Based Assessments (CBAs) emerged as one way to assure that an evaluation would be both efficient and functional. Broadly defined, CBA is the process of determining students' instructional needs within a curriculum by directly assessing specific curriculum skills (Choate, Enright, Miller, Poteet, & Rakes, 1995).

Curriculum-Based Measurement (CBM) is one type of CBA and typically refers to a standardized set of procedures utilized to measure student performance in the areas of reading, math, and written expression (Shinn, 1998). These standardized procedures provide directions for creating, administering, and using tests that have been researched over time and shown to be useful and technically adequate.

This chapter is about Curriculum-Based Evaluation (CBE). CBE can be defined as a thoughtful process of comparison and judgment (Howell & Nolet, 2000). It provides a decision-making framework for considering the assumed causes of a student's academic or social problems, validating these hypotheses, and linking the results to a teaching recommendation.

Because the curriculum-based terminology is so often confused, it seems important to draw a distinction between measurement and evaluation. This distinction is important for an accurate understanding of CBE and of this chapter. To clarify the use of these initials let us provide a bit of entomology. The root of the word evaluate is "value." The "e" at the first of the word is a reduction of "ex" which means "to go forth" in Latin. The "ate" at the end of the word means to find or provide. So "e-valu-ate" means to go out and find the value of something.

In distinction, *measurement* has a more restricted meaning. "Measure" means to gauge, or to find the limits of, a product or quality. The "ment" at the end makes the word one of action (e.g., *to use* a measuring spoon). So measurement means the taking of action in order to determine the limits or extent of something. The term, measurement, has no direct tie to worth or value (it applies equally to important and worthless quantities and qualities). That is its critical difference from evaluation and is why CBE and CBM are distinct.

What is CBE? The heart of a productive CBE is *not* the application of some unique and/or elaborate set of measurement instruments. It is a network of curriculum-driven "If...Then" precepts (an example of this is shown in Figure 17) Each of these are attached to a question and goes something like this:

Question: "Does Mary have difficulty with computation?"

First option: "**If** the answer to the question is *No*, **Then** there is no need for additional questions."

Second option: "**If** the answer to the question is *Yes*, **Then** additional questions are needed."

For example, "Does Mary have skill at basic computational facts?" To find out about these skills, a CBM covering computation facts drawn from the math curriculum will be given and the "If ...Then" sequence repeated:

"**If** the answer to the above question is *Yes*, **Then** higher level computation skills need to be checked."

"**If** the answer to the question is *No*, **Then** additional questions about the sub-skills of computation facts need to be asked."

(Should it prove that these other skills are adequate, then the conclusion would be to teach the computation facts.)

In this fashion, decisions about the knowledge that needs to be examined, as well as that which needs to be taught, are guided by applying the rationale and rules supplied earlier in this chapter. The "If...Then" format becomes the carrier for these guidelines. In addition, the approach uses other formats of inquiry during attempts to answer the questions. It also follows one essential rule.

The rule that underlies all CBE is simple. "If a student can't do something, then it is because the student doesn't know how." The implication of this rule is that the "If ... Then" precepts only deal with things students need to know. Therefore, the precepts focus on potentially missing prior knowledge of the targeted task. This requisite knowledge is the sole focus of the CBE process. The rule tells us to only think about other skills. This forces the process of inquiry, and the subsequent conclusions, to be aligned with the curriculum because the presenting problem is a lack of progress in some aspect of the expected academic or social outcomes (which define the curriculum). Also, because the curriculum is what schools are supposed to teach, the rule forces us to focus only on those things that can be altered by instruction.

Optimally, the CBE format should be combined with an existing system of school-based problem solving and intervention. The process is relatively straightforward. It requires us to answer five questions.

1. *What is the problem and why is it happening?* This is a stage of problem identification and problem analysis that is critical before implementing any intervention. It is carried out to identify missing prior knowledge of the targeted task. It is during this stage that the "If...Then" format is first employed.

2. *What are we going to do about the problem?* An intervention is selected and designed based on the analysis of the problem.

3. *How will we monitor the intervention?*

4. *Is our intervention working?* In this step, data are utilized to make decisions regarding the effectiveness of the instructional strategies and to make a determination as to need for future intervention. (For more information on this problem-solving approach, see Tilly, this volume.) The "If...Then" precepts may again be employed at this level.

5. *If the intervention isn't working, then why is it not working?* This is the step where CBE is most valuable because this is where the nature of the problem is examined and not just monitored.

Basic Considerations

Before moving directly to the application of CBE, it seems like a good idea to review the context in which CBE must be employed. It also seems like a good idea to try and articulate some solutions to problems that often evolve from that context. The evaluation of students with social and/or academic problems is difficult. There are many reasons for this. When students are entitled to compensatory education, efforts to comply with federal and state regulations (along with the misunderstanding from categories, labels, disability theories, and terminology) can create considerable confusion (Zigmond, 1997). As if this were not sufficient, here are some other factors that can contribute to confusion:

1. The sometimes conflicting efforts to explain and improve the learning characteristics of the student.

2. The intricate and still, at times, ill-defined components of the instruction that will be needed to address those learning characteristics.

3. Uncertainty regarding measurements and measures.

4. Confusion about the location and context of service delivery.

5. Misinterpretation of the curriculum (obviously an important concern for CBE). The curriculum is composed of volumes of content, behavior and quality expectations. This amalgamation makes recognizing desirable learning outcomes for singular students hard because finding worthwhile outcomes depend on the evaluator's expertise within the topics of concern.

6. The challenges encountered when individuals from different professional backgrounds work together during the process of problem solution.

The way to work with these confounds is to import order. This can be accomplished by bringing to the problem-solving effort a format for discussion and thought consistent with the original purpose of the effort (Marzano et al., 1988). This format must be logical, flexible, and acceptable to those who will use it. But beyond that, it must be powerful.

Lanfer (1997, p. 61) describes the nature of a functional planning format. These are presented below, and common violations occurring within educational evaluation are provided in italics:

1. "Under conditions of uncertainty, avoid preparing too early a full and detailed plan." An outline plan should be prepared for the entire project and a detailed plan for the short term. *Example error, having teachers prepare IEPs prior to IEP meetings* and/or *scheduling infrequent evaluations of progress towards long-term objectives.*

2. "The outline plan should be prepared with enough flexibility to allow adjustment to a reality that can only be ascertained in the future." *Example error, viewing the contents of an IEP [Individual Education Plan] as if they [the contents] are "locked in" for one year.*

3. "Throughout the course of the project, data must be continuously and actively assembled for future planning." *Example error, "front loading" the measurement and evaluation process by carrying out a massive effort before the plan is developed and then following the plan with minimal monitoring.*

4. "God is in the details, but not too early." *Example error, members of the problem-solving team arrive at meetings having already reached conclusions.*

CBE can provide a logic for working within the contextual disarray of educational decision making while avoiding errors such as those above. CBE is a good process for three reasons:

1. By definition, CBE is aligned with the academic and social outcomes one would select when planning an intervention.

2. CBE utilizes CBM. As will be explained shortly, these are easily administered within classroom, leisure, and/or family contexts. CBM measures are

simple to interpret because they typically yield behavioral statements.

3. CBE is flexible and formative. "Front loaded" decision making is de-emphasized in favor of data collection and decision making across time. This allows for the precise recognition of interventions, an area often ignored when developing formal plans (Bateman, & Linden, 1997).

Barriers to Implementing CBE

Impediments to the use of CBM include:

1. Time required to use the process

2. Concern about validity of the measures

3. Logistics of making a change in common practice

Two of these concerns have now been satisfactorily addressed for those who attend to research findings. Deno (1985) and Martson (1989) have addressed the time issue, and Allinder & Eccarius (1999) have spoken to measurement validity.

This leaves us with the logistics of change itself (i.e., implementation of CBM/CBE). If CBE is as great as we (the authors) say it is, then why doesn't everyone use it? There are many answers to this question. One is that change in evaluation practice is hard to accomplish even when the change is beneficial (Fuchs, Fuchs, Hamlett, & Ferguson, 1992). In a context of competing ideas, change is not simply an issue of adopting new practice. Unless we want to double the workload, some evaluation techniques must be replaced when new ones are added. This means the matter is not as simple as showing that CBE works. It must be shown that CBE works better in terms of utility and/or cost effectiveness (Vaughn, Klinger, & Hughes, 2000). However, there are two reasons why this may be difficult to accomplish: (a) The inertia found in almost all systems makes them hard to change. Additionally, even when a great deal of pressure is applied, organizations do not typically change quickly. They are even apt to tighten existing structures in the belief that the system is correct but not being run effectively. This same outcome can result from the perception that the system is not adequately "appreciated" (Spinoza, Flores, & Dreyfus, 1997). (b) In education and school psychology collective inertia can extend from federal offices down through professional organizations and then on to publishers and other marketers of evaluation technology and into school districts, schools, and eventually classrooms. This makes it difficult for individuals or groups working at any point in the series to undertake efforts at effective change. Collective inertia in the area of psycho-educational evaluation is not the result of missing empirical results or the lack of efforts at innovation (see Tilly, this volume). However, some causes can be identified.

THE SUPREMACY OF MEASUREMENT

Change may be inhibited when we focus on the tools of measurement (and the scores they yield) at the expense of the processes of problem solving. This is why we draw a distinction between CBE (a thoughtful process of comparison and judgment) and CBM (a process of measurement and data collection). Gould (1981) cautions against the fallacy of "reification," which he defines as ". . . the tendency to convert abstract ideas into entities." (p. 24). Similarly Kaplan (1964) has referred to the "mystique of quantity," which he defines as ". . . an exaggerated regard for the significance of measurement, just because it is quantitative . . . " (p. 72). Kaplan goes on to assert that in this mystique, "Number is treated as having an intrinsic scientific value." In CBM, numbers only have meaning if they inform CBE.

In a complex system, whenever one person sets out to change, that person is not just undertaking personal change but is setting out to alter the system. Within psycho-educational evaluation there are components, and within each sub-system (test administration, personnel training, service delivery) there are people who believe different things. If two different people in the same system hold two different, and competing, opinions about the goal of the assessment, then it is disruptive. This sort of situation reinforces personal inertia. The solution, of course, is to unite people under the system's purpose and to utilize differences of opinion as a strength (e.g., to promote flexibility). Lanfer (1997) recommends specific remedies to address this problem:

1. Work to assure that individuals think they *can* work efficiently and that they *should* work efficiently.

2. Give individuals and subgroups power so that they become committed to a system *they* have helped develop.

3. Establish high expectations for each person in the system.

4. Ensure that each person understands the importance and meaning of his or her contribution.

5. Allow individuals the flexibility and autonomy needed to trouble shoot problems and to make the system more efficient.

6. Make the system "transparent" so each person knows what everyone else is doing.

Making the system transparent seems particularly appropriate to the role of CBE within psycho-educational evaluation. For this discussion, transparency means not only that each individual on the evaluation team knows what every other individual is doing but that they also understand what every other individual is doing. *They do not have to like it, but they must understand it.* This is because the final product is a team product, not individual. Similarly, other teams working to help the student must also be transparent to the evaluation team. Yet it is a mistake to assume that simply putting the members (or teams) together will somehow promote this transparency. The experience of those of us who have served on teams can attest to that. The requirement that individuals with different backgrounds in evaluation work together does not, in and of itself, produce interdisciplinary understanding and cooperation. It only requires proximity. Work must be done to assure that teams operate well. Information on the development of effective groups can be found in the chapters on teams and collaboration in this book. Relative to this chapter, support of effective use of CBE within team formats can be facilitated by administrators who support CBE with training for current employees. In addition, personnel departments should screen new applicants for competence in CBE.

The purpose of this discussion of problem solving for removing barriers to innovation will become clearer in the section that follows. But it is important to know that the technology of CBE is not new. For example, important work pertaining to direct measurement and formative evaluation can be found in sources such as Deno and Mirkin's (1977) work on data-based program evaluation. That work is more than 20 years old, and the principles and techniques presented in it are still not common practice.

BEST PRACTICE

Best practices in the use of CBE can most effectively be presented through a case study. In this case we have selected "reading" as the problem domain. Because of length considerations this will be the only content area covered, although the same process can be applied to a wide array of academic and social skill content. Those readers interested in social skills should read the chapter by Knoster and McCurdy in this volume. Other sources of information include McLoughlin & Lewis (2001) and the Center For Collaborative Research and Practice (http://www.air-dc.org/cecp/).

We will now review a case in which CBE was utilized to make instructional decisions for a student. The student is Susan.

BACKGROUND INFORMATION

Susan is a third grader at an elementary school we will call Happy Valley Elementary. Happy Valley Elementary is a small school in a district in Iowa on the outskirts of a metropolitan area of approximately 500,000 people. The student population is about 400 students with 26% eligible for free or reduced lunch because of low-income levels.

Happy Valley Elementary uses the problem-solving approach developed by Heartland Area Education Agency (2000) to address the needs of students at various levels of severity.

Susan has attended Happy Valley since she started kindergarten. She has not been retained, but her records indicate that reading and writing skills have been consistent areas of concern. In the fall of her third-grade year, Susan's teacher noted that Susan's reading performance was far lower than that of her peers and that her oral reading was slow and laborious. Susan also made many errors.

AN INITIAL ATTEMPT

The teacher and Susan's mother discussed the problem and decided to have Susan read at home every night for 15 minutes from books the teacher would select and send home on a regular basis. Susan was in the Title One Remedial reading program, and the Title One teacher routinely kept oral reading fluency data (number of words read correctly per minute) by using CBM procedures on all her students. Susan's progress was charted and graphed, and these data were available to the general classroom teacher and parents. After trying their plan for a while, Susan's teacher and parents were not satisfied with her reading progress and decided to make a referral to the Building Assistance Team (BAT).

BUILDING ASSISTANCE TEAM

At Happy Valley, the teachers at each grade level form a team that meets when needed to engage in problem solving. The third-grade BAT determined that it would be appropriate for Susan to be placed in a reading group that was taught collaboratively in the general education classroom by the special education teacher and the general education teacher. At the time there were several students in the class who were identified as students in need of special education and who had IEPs with goals in the area of reading. The IEP team had determined the most appropriate service-delivery model for those students was to provide instruction in the general classroom with the special education and general education teacher co-teaching. Reading materials at her instructional level were used. In addition, the teacher began using Peer-Assisted Learning Strategies (Simmons, Fuchs, Fuchs, Hodge, & Mathes, 1994). This provided Susan with additional practice reading and feedback from a peer coach.

CBE

Later, the third-grade BAT reviewed the CBM monitoring data collected by the Title One teacher and again determined that Susan's progress was still not sufficient. At this point the BAT decided to involve the school psychologist.

The BAT had already defined oral reading fluency as the problem behavior, and there appeared to be no need to further define the problem. It was determined, however, that additional analysis of the problem was needed. This is where full CBE was used. During problem analysis, the problem-solving team is trying to answer the question, "If current interventions are not working, then why aren't they working?"

A CBE will lead the examiner through a decision-making process that will guide the examiner to propose a series of curriculum-based hypotheses as to why the problem is occurring. Each question or hypothesis will focus on missing prior knowledge of the oral reading task. This hypothesis is then validated or discarded. Once a hypothesis has been validated, then the intervention(s) that will most likely address the problem will be identified. Figure 1 provides a flowchart illustrating the process of CBE used for the area of reading decoding and, at the end of the presentation, Figure 17 provides a summary of the precepts employed during that process. It also contains general information about the terms which will be used throughout the upcoming discussion. In Figure 1, the arrows indicate the path followed in this evaluation. All procedures described as part of this process have been adapted from Howell and Nolet (2000).

Evaluation and explanation

Susan's case will be presented in the form of the actions that were taken during the evaluation and the questions that were answered throughout the decision-making process (see Figure 2).

ACTION 1: SURVEY READING SKILLS

As seen in Figure 2 the whole process starts out with what follows:

> Question. Are oral reading skills acceptable? If "yes," then the decoding evaluation is discontinued. If "no," then the student's current level of performance is noted and the next question is asked.

To answer this question, the school psychologist began by using survey-level assessment procedures. Survey-level procedures are initial assessments conducted to collect a general sample of behavior. These assessments guide further assessment. The sample is also used to determine whether or not the magnitude of the problem warrants further evaluation. These procedures can consist of reviews, interviews, observations, or tests (RIOT).

The first survey-level procedure used in Susan's case was a teacher interview. During this interview the teacher was asked to consider some specific prerequisite reading skills and indicate if the skill had been taught, whether the student demonstrates the skill, or if it is considered a problem. The school psychologist needed this information so that she would not spend time assessing prior knowledge the student could not be expected to demonstrate because it had never been taught. There were numerous skills the teacher indicated had been taught and were considered problem areas for Susan. The skills the teacher identified as problems were in both decoding and comprehension. Also, during the interview the teacher was asked to consider the demands of the setting and whether or not there was anything in the environment that may be interfering with the student's benefit from reading instruction. The teacher did not identify any interfering factors in the environment. The next survey-level procedure used in Susan's reading evaluation was CBM of oral reading. The Title One teacher had been monitoring Susan in third-grade reading material since the beginning of the school year; therefore, the school psychologist had access to the data and did not need to carry out additional assessment. (Another rule of evaluation is to never assess if other current data are available from a reliable source.) According to progress monitoring data, Susan was reading 37 words correct per minute with 78% accuracy.

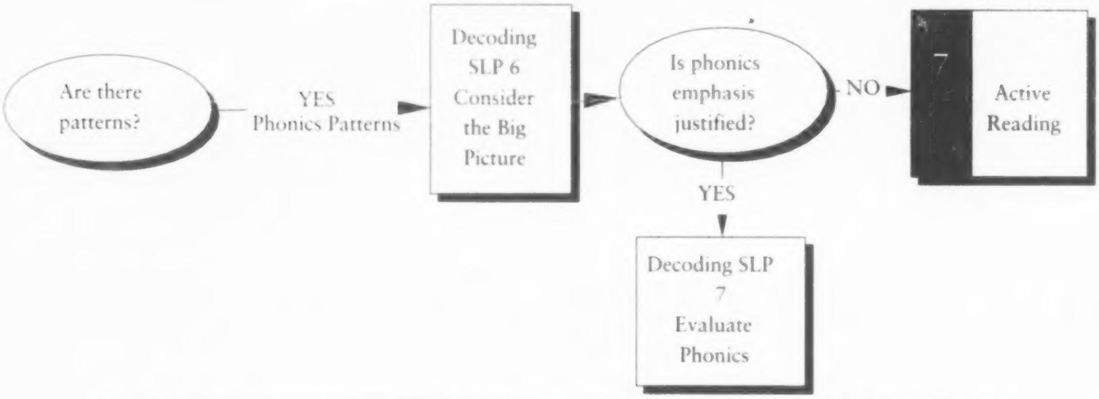
Given this information the school psychologist developed a new, but related, evaluation question. *Was Susan's oral reading adequate when given easier passages?*

If a student's accuracy and fluency improves on easier passages, **Then** there may be sufficient skills to support teaching within the context of passage reading.

New information, beyond the Title One records, is needed to answer this question. So Susan's reading was assessed with second-grade passages. Susan read 65 words correct per minute with 80% accuracy in second-grade–level material. This means her rate did improve, but not to the 100 words per minute (wpm) criteria. Once again, this information was important because it indicates that Susan does have sufficient prior knowledge of letter-sound associations to

Figure 1 is a flowchart. So that you can better understand it, here is a brief explanation of its content.

- An ellipse is a question that an evaluator should ask;
- The answers to the questions are noted on the lines;
- A rectangle is an action that must be taken; and,
- A rectangle with a number on the side (e.g. "7") is a decision to try, and to monitor. It is a teaching recommendation.


Are there patterns?
YES
Phonics Patterns
Decoding SLP 6 Consider the Big Picture
Is phonics emphasis justified?
NO
7
Active Reading
YES
Decoding SLP 7 Evaluate Phonics

Note that "SLP" stands for Specific Level Procedure. These are narrow-band measurement techniques (reviews of products, interviews, observations or tests) designed to summarize a students behavior on a precise target.

(See figure on following page.)

Figure 1. The process of reading evaluation

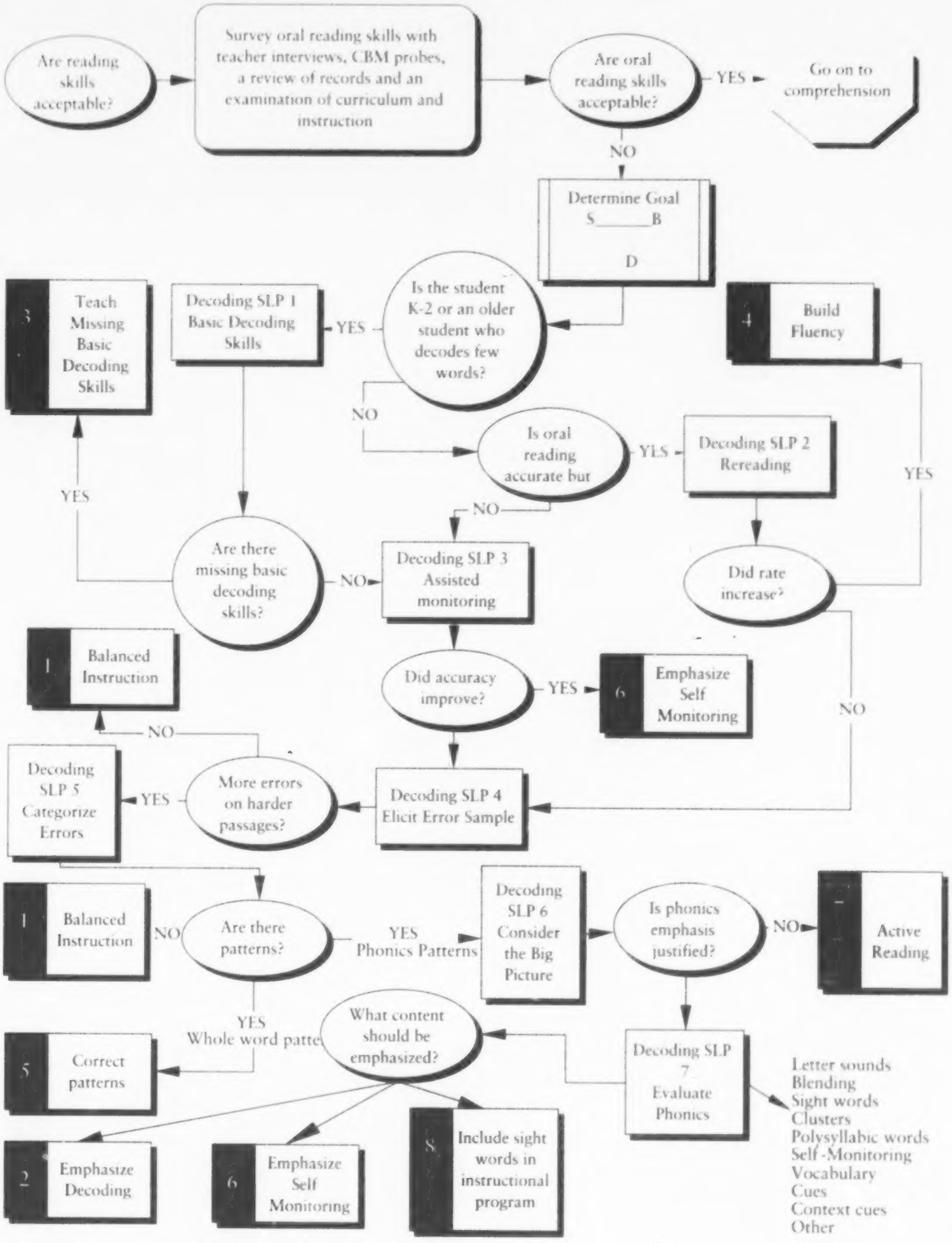
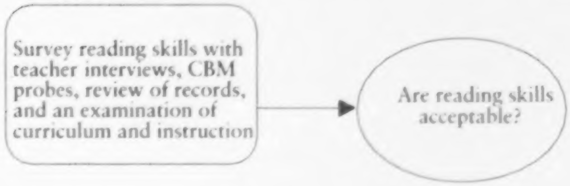

Are reading skills acceptable?
Survey oral reading skills with teacher interviews, CBM probes, a review of records and an examination of curriculum and instruction
Are oral reading skills acceptable?
YES
Go on to comprehension
NO
Determine Goal
S B
D
Is the student K-2 or an older student who decodes few words?
YES
Decoding SLP 1 Basic Decoding Skills
3
Teach Missing Basic Decoding Skills
4
Build Fluency
NO
Is oral reading accurate but
YES
Decoding SLP 2 Rereading
YES
YES
NO
Are there missing basic decoding skills?
NO
Decoding SLP 3 Assisted monitoring
Did rate increase?
1
Balanced Instruction
Did accuracy improve?
YES
6
Emphasize Self Monitoring
NO
NO
Decoding SLP 5 Categorize Errors
YES
More errors on harder passages?
Decoding SLP 4 Elicit Error Sample
1
Balanced Instruction
NO
Are there patterns?
YES Phonics Patterns
Decoding SLP 6 Consider the Big Picture
Is phonics emphasis justified?
NO
7
Active Reading
YES Whole word patte
What content should be emphasized?
5
Correct patterns
Decoding SLP 7 Evaluate Phonics
Letter sounds
Blending
Sight words
Clusters
Polysyllabic words
Self-Monitoring
Vocabulary
Cues
Context cues
Other
2
Emphasize Decoding
6
Emphasize Self Monitoring
8
Include sight words in instructional program

Figure 2. Determine if reading is acceptable


Survey reading skills with teacher interviews, CBM probes, review of records, and an examination of curriculum and instruction
Are reading skills acceptable?

decode some material. Something is standing in the way of her attainment of sufficient automaticity in reading. We will return to this finding after finishing the survey process.

The next step in Action 1 was to review records and permanent products. There were few permanent products to review, although several samples of her writing were reviewed, which indicated numerous spelling errors even on short, consonant vowel consonant words.

When the school psychologist reviewed records she found that in the past a special program targeting at-risk readers had served Susan. Test scores in her file included the California Achievement Test (CAT) given in the spring of second grade. Her verbal scores were at the 27%, quantitative 23%, non-verbal 69%, and composite 40%. Iowa Test of Basic Skills scores from winter of third grade indicated reading 5th percentile, language 33rd percentile, and math 40th percentile according to Iowa norms.

The school psychologist also reviewed hearing, vision, and health records to rule out any sensory or health impairments that may be interfering with learning. Vision and hearing had been screened earlier in the year, with normal results. Susan's health records had not been updated for over a year, so the school nurse called the parent and inquired about any health concerns. Susan's mother indicated that Susan did not have any health problems related to reading. As a result, any focus on health problems was set aside until if, or when, new information was obtained.

The final survey-level assessment was a review of the curriculum and the instructional materials at Happy Valley Elementary in Susan's class. In Iowa, each school district develops its own standards and benchmarks. Happy Valley's district was in the process of completing standards and benchmarks in the area of reading. By reviewing materials that were currently being used by the teacher, it appeared that although Susan had received skill instruction on specific decoding skills, it had not been provided in any particular sequence. The reading material being used in the classroom was drawn from children's literature, and this might be a problem because the vocabulary in this literature is infrequently controlled (Adams, 1990). This is problematic because, without a clear understanding of what is to be taught, quality instruction is not possible (Price & Nelson, 1999).

INTERPRETATION OF ACTION 1

Survey Reading Skills Question. Look at Figure 3. In the sphere the question "Are oral reading skills acceptable?" is asked. The answer was "no," so the student's current level of performance is noted and the next question is asked.

Because the student's reading was unacceptable, the next step under Action 1 was to summarize the magnitude of the problem.

The Heartland criterion for grades three and above is that students should read 100–140 wpm. Susan correctly read 37 wpm. According to this standard, her oral reading is not acceptable. Another standard is to compare Susan to typical peers in her school district. The district had established local norms by using CBM several years ago. The median score for third graders according to district norms is 121 wpm. Susan's score of 37 wpm falls at the 8th percentile rank. According to this standard, her reading rate is also not acceptable. Figure 4 illustrates Susan's performance compared to same grade peers in her school district.

Figure 3. Determine discrepancy in oral reading

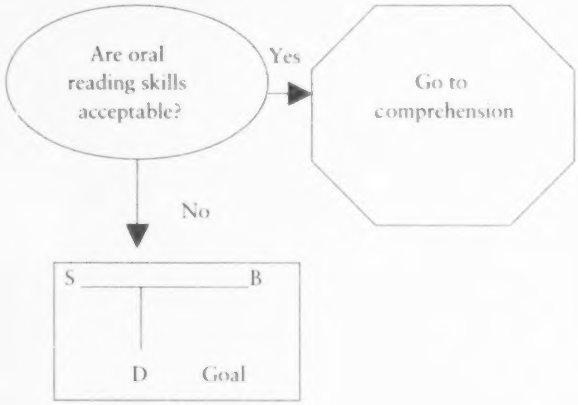
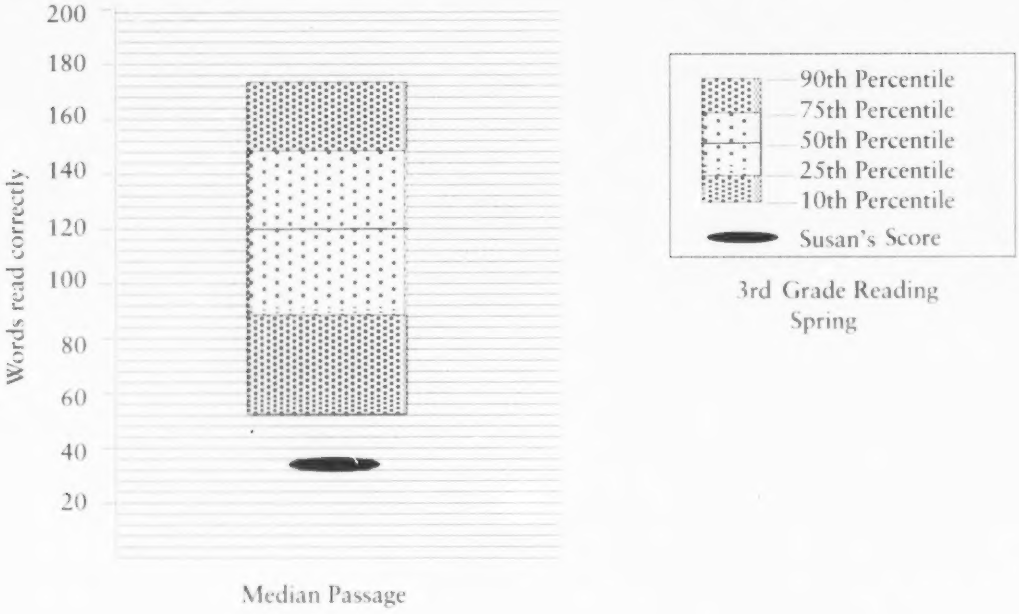


Figure 4. Susan's place in a score distribution



If oral reading had been acceptable, **Then** it would have been more appropriate to consider an evaluation of comprehension skills. However, the answer to the question raised in Figure 3 was "no." Since oral reading fluency can be thought of as one prerequisite of comprehension (along with knowledge of word meaning and content), the school psychologist decided to continue to examine Susan's speed and accuracy of decoding (Committee on the Prevention of Reading Difficulties in Young Children, 1998).

Before continuing with the evaluation, Susan's goal was formalized by using the following formula provided in Figure 3.

standard 100 – behavior 37 (Susan's Score) = discrepancy 63

The goal is to improve Susan's oral reading by 63 wpm.

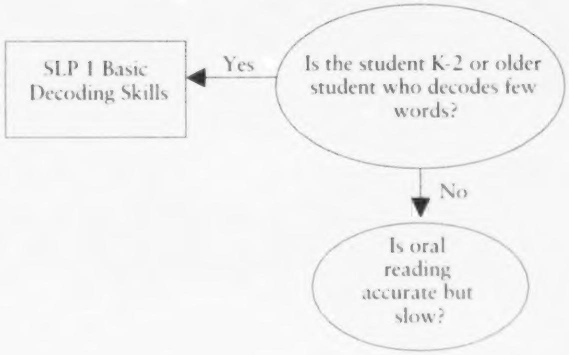
The standard the school psychologist used was the marginal passing score recommended by Howell and Nolet (2000). Susan's goal was to increase her reading fluency by 63 wpm to 100 wpm. To do this, the evaluation had to be continued to check assumptions about missing prior knowledge that might be causing her reading difficulties. After the survey-level assessment the school psychologist needed to consider which of the Specific Level Procedures (SLP) to use. Because of Susan's low performance the evaluator decided to use SLP 1 (awareness of print and sounds) before following the flowchart directly to SLP 3 (assisted monitoring).

ACTION 2: ASSESS BASIC DECODING SKILLS

Question. Next look at Figure 5. (a) Is the student in kindergarten or first grade. (b) Does the student appear to be very low in the use of decoding skills? If "yes" to either, then the student's basic decoding skills need to be checked. If "no," then the student's rate and accuracy when re-reading needs to be determined.

Because the answer was "yes," it was decided that basic decoding skills should be checked by using SLP 1. These basic skills have been called many different things. In the literature they are said to include knowledge of the alphabetic principles, including phonemic and phonetic skills, that go all of the way from letter/sound discrimination to decoding three-letter words (Committee on the Prevention of Reading Difficulties in Young Children, 1998). Some call them "pre-reading" skills while others simply call them "reading skills." They are distinct from previ-

Figure 5. Consider the age of the student


SLP 1 Basic Decoding Skills
Yes
Is the student K-2 or older student who decodes few words?
No
Is oral reading accurate but slow?

ous efforts to define early reading content in that they include letters and/or letter sounds (not circles or boxes or train whistles or eye patches).

These basic skills provide a foundation necessary for reading success in that the more we know about letter-sound associations (phonics) the better we are able to manipulate written language within our head. Typically, these skills are established by the end of kindergarten (Perfetti, 1985; Good, 1999). In most cases they are learned along with phonics instruction itself. Therefore, a "pure" measure of phonological awareness would only be given to a student in preschool or kindergarten. However, as with all skills, an important proficiency dimension applies to this category. That is *automaticity*. In this case the evaluator is wondering if Susan has the skills needed to maintain rate and accuracy when using basic phonological and phonetic skills. In her interview with the teacher and her examination of the curriculum, it was evident that Susan had never received explicit instruction in phonemic or phonetic skills. Second, examination of Susan's spelling errors indicated that she did not consistently associate letters with each sound in the word she was attempting to spell. Finally, Susan appeared to only be recognizing sight words while making errors on words requiring decoding skills. Therefore, although on the basis of her age one would expect Susan to have adequate basic reading skills, the school psychologist decided to go ahead and assess this area and used what follows as a logical consideration:

1. Susan seems to be accurate at all of the basic skills but is still too slow.
2. There is a difference between knowing a skill and efficiently connecting it to practice.
3. So, Susan needs to have her automaticity on some basic reading skills rechecked.

The results of this assessment are displayed in Figure 6.

Susan was accurate and at least marginally fluent in all skills. If this assessment had indicated missing beginning reading skills, then the school psychologist would have made a recommendation to teach knowledge of these skills as part of Susan's instructional program. However, the assessment indicated that Susan had the basic foundational skills necessary to read. And, on the skills where fluency was somewhat low, the rate would probably be better increased through passage reading. Therefore, the question raised in Action 2 is interpreted as follows.

INTERPRETATION: ACTION 2

Assess Beginning Reading Skills Question. Next look at Figures 7 and 8. Is the student in kindergarten or first grade, or does the student appear to have very low decoding skills? Answer is "no."

This means more assessment will be needed to determine the cause of Susan's reading difficulty.

ACTION 3: ASSISTED MONITORING

Question. Figure 8 shows the path to SLP 3. In turn, SLP 3 leads to the question, "Will the student's accuracy improve after being given assistance to monitor errors?" If "yes," then instruction on the use of self-monitoring (decoding treatment 6) will be needed. If "no," then an error sample will need to be elicited.

Two simple procedures were utilized to determine if Susan would monitor errors when assisted. The first of these procedures is simply a pep talk. The school psychologist gave Susan another passage from the third-grade curriculum. This time Susan was told how important it was to do her very best reading. She was encouraged to read accurately. The second procedure used is called the table tap. Susan was given another passage to read and was told that every time she made an error, the evaluator would immediately tap the table with her pen. This would be Susan's cue to go back and correct errors. Susan's accuracy did not improve with either procedure. It appears that even with assistance Susan does not monitor and cor-

Figure 6. Accuracy and rate criterion for various code skills

Skill	Compound Words	Syllables	Sounds
Blending from print	93% Marginal rate	95% Marginal rate	100% Adequate Rate
Sound/letter correspondence	96% Marginal rate	100% Adequate rate	100% Adequate rate
Blending sounds (blending sounds, syllables, or words to make new words). Example: s^u^n = sun, ti^ger = tiger, tip^toe = tiptoe.	100% Adequate rate	100% Adequate rate	100% Adequate rate
Segmenting sounds (breaking a word apart into sounds, syllables, or smaller words). Example: sock = s^o^ck, table = ta^ble, cowboy = cow^boy.	100% Adequate rate	100% Adequate rate	100% Adequate rate
Sound deletion (deleting sounds, syllables, or small words from words). Example: What would be left if I took "f'" away from farm?	100% Adequate rate	100% Adequate rate	100% Adequate rate

Figure 7. Determine if there are missing decoding skills

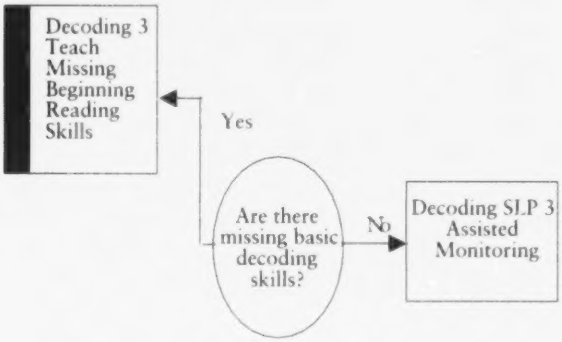
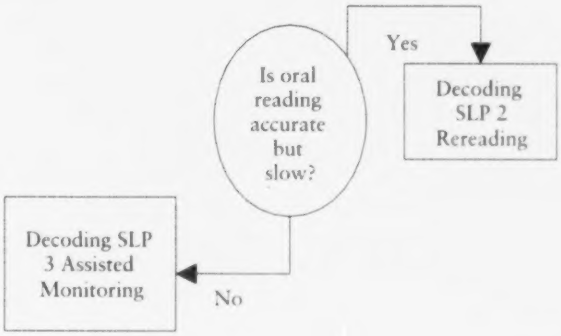

Decoding 3
Teach
Missing
Beginning
Reading
Skills
Yes
Are there missing basic decoding skills?
No
Decoding SLP 3
Assisted
Monitoring

Figure 8. Determine if the student is accurate but slow


Is oral reading accurate but slow?
Yes
Decoding
SLP 2
Rereading
No
Decoding SLP
3 Assisted
Monitoring

rect her errors. Therefore, further evaluation is needed.

INTERPRETATION: ACTION 3, ASSISTED MONITORING

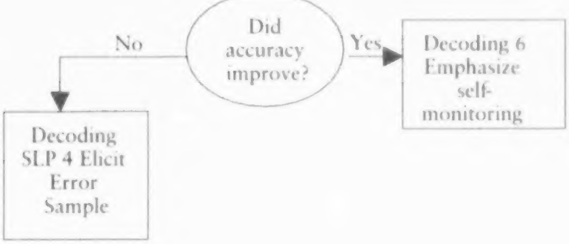
Question. Did accuracy improve? Answer is "no." This means that the evaluator needs to go on to SLP 4, as seen in Figure 9.

ACTION 4: ELICIT AN ERROR SAMPLE

Question. Might the student errors harm meaning? If "yes," then go to SLP 5. If "no," then go to teaching recommendation 1 as shown in Figure 10.

To answer this question the school psychologist gave Susan more passages to read orally so that the school psychologist could collect a sample of Susan's errors. The school psychologist selected a 250-word

Figure 9. Determine if assistance improves accuracy


Did accuracy improve?
No
Yes
Decoding 6 Emphasize self-monitoring
Decoding SLP 4 Elicit Error Sample

passage that she predicted Susan would read with 80–85% accuracy. The passage level was determined by referring to the results of Susan's survey level assessment.

It is important to use passages in which the student is about 80–85% accurate. If more accurate, then it would not be possible to gather enough errors (as was the case on Susan's survey-level passage). If the passage promotes too many errors, then it would be impossible to categorize and look for error patterns, because, when many errors occur, they often reflect as much guessing as they do decoding. Collecting 50 errors is recommended for a student Susan's age.

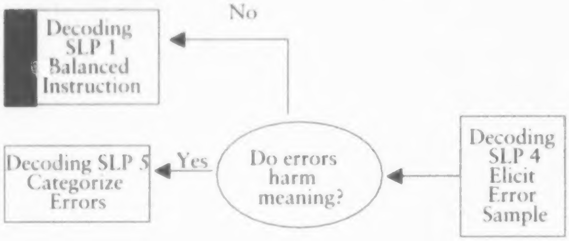
Susan was instructed to take her time and to read carefully, because this action is not about rate but rather accuracy. When CBM procedures were used earlier during survey-level testing, each time Susan hesitated for more than 3 seconds the school psychologist told Susan the word. For this measure Susan was encouraged to read every word, and no words are supplied. The evaluator used a tape recorder so that she (the evaluator) could go back and listen to check the scoring. (Note: If, after reading the first 20 words of the passage, Susan had not been near 80–85% accuracy, then the school psychologist would have discontinued and selected a different passage.) The school psychologist marked the errors so that she could categorize them later if needed. See Figure 11 for an example.

In Figure 11, *children* was mispronounced as *chick*, *flowers* was mispronounced as *flown* but then self corrected, *the* was omitted, and *to* was inserted.

INTERPRETATION: ACTION 4, ELICIT ERROR SAMPLE

Question. Did student errors compromise meaning? The answer is "yes," so, as seen in Figure 12, errors need to be categorized.

Figure 10. Determine if the skills maintain as passages get harder


Decoding SLP 1 Balanced Instruction
No
Decoding SLP 5 Categorize Errors
Yes
Do errors harm meaning?
Decoding SLP 4 Elicit Error Sample

ACTION 5: CATEGORIZE ERRORS

Question. The question in Figure 13 is "Are there patterns?" If "yes,", then employ decoding intervention 5. If "no," then go to SLP 6.

The school psychologist began to categorize the sample of 50 errors obtained earlier. She used the form shown in Figure 2. The first question she asked was, "Do errors in decoding impair Susan's understanding of the passage?" To answer this question the school psychologist took each error and placed it into

Figure 11. An example system for categorizing decoding errors

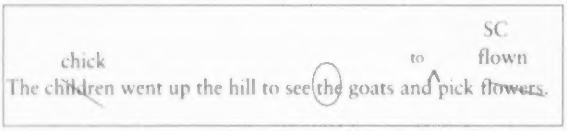

SC
chick
to
flown
The children went up the hill to see the goats and pick flowers.

Figure 12. Determine if errors alter the meaning of the passage

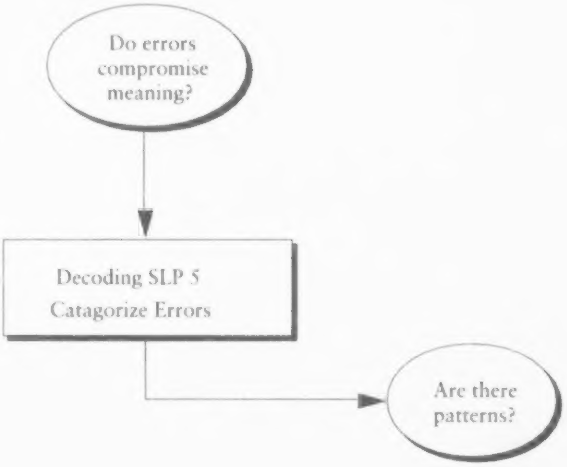
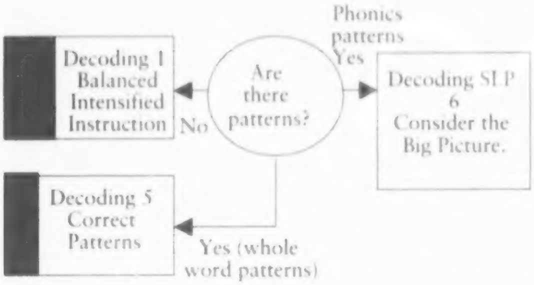

Do errors compromise meaning?
Decoding SLP 5 Catagorize Errors
Are there patterns?

Figure 13. Determine if there are error patterns



one of two categories, those errors that violated the meaning of the author and those that did not. **If** Susan's errors were not likely to affect her understanding of the passage (e.g., omission of the words *not* in this sentence), **Then** they would not be considered important errors. They could be ignored.

Susan's errors were important errors in that they significantly altered the meaning of the passage and could not be ignored. For example, reading *chick* for *children* and *flown* for *flowers* changes the meaning of the passage. Therefore, further analysis was performed. Next, patterns to errors, such as like insertions, substitutions, hesitations, or omissions, are considered. These are error types that do not necessarily include phonetic mistakes. In this case the question was, "Do the errors fall into certain patterns?"

The final step in the analysis was to determine if specific code content errors were occurring.

INTERPRETATION: ACTION 5, CATEGORIZE ERRORS

Question. Are there error patterns? Answer is "yes." The majority of Susan's errors violated the meaning of the text. Susan's errors indicated that she was not consistently recognizing longer sight words in passages and was having difficulty applying decoding rules and strategies to words of all lengths. Susan also had difficulty with words if they contain b's and d's. **If** there had been no patterns to the errors and no decoding errors, **Then** the school psychologist would have recommended balanced instruction. **If** there were error patterns (e.g., substitutions) without phonics errors evident, **Then** the school psychologist would have gone to teaching recommendation 5 to correct the error patterns. Since there were phonics errors, she decided to step back and consider the big picture (SLP 6).

ACTION 6: CONSIDER THE BIG PICTURE

Question. As seen in Figure 14, the question is, "Is an emphasis on phonics justified?" If "yes," then, Susan will go to decoding recommendation 7. If "no," then Susan will go to SLP 7.

SLP 6 involves gathering all the data collected up to this point and considering whether or not phonics should be emphasized. The pieces of information allow the school psychologist to answer the following question, "Are there decoding skills this student needs to learn to be a successful reader?"

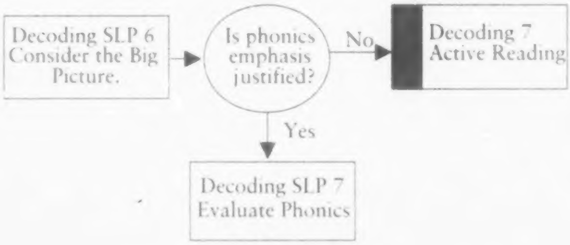
1. What was the most fundamental error pattern? The error analysis indicated that there were significant decoding errors. More examples of these errors are needed to determine exactly what skills need to be taught.

2. In the area of reading what has been taught and how has it been taught? During the survey-level assessment, the school psychologist had performed an analysis of the curriculum used in the district and found some problems with the sequence of skills taught. Beyond that, it was unclear as to whether or not the standards and benchmarks outlined by the district were being adhered to in Susan's class. This is a very difficult judgment to make and involved more in-depth interviews with teachers.

3. What is the student's age? Susan is currently a third grader. She is relatively young and has not had numerous years of direct instruction in a code emphasis approach.

4. What is her current level of performance? She is accurate at basic decoding but lacks automaticity. There are many decoding errors in her oral reading.

Figure 14. Determine if the focus should be on phonics



INTERPRETATION: ACTION 6, CONSIDER THE BIG PICTURE

Question. Is an emphasis on phonics justified? Answer is "yes," as seen in Figure 15.

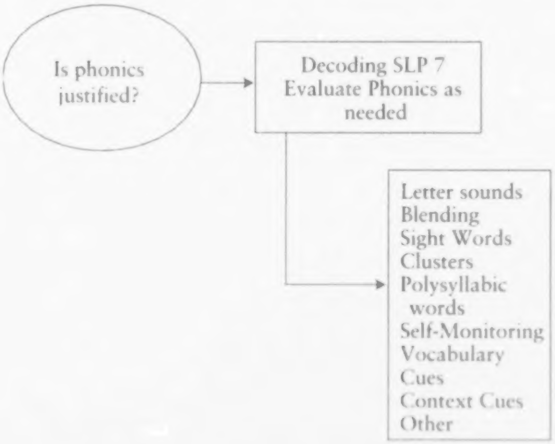
If the school psychologist had decided that a code emphasis approach was not warranted, then she would have recommended working with Susan to become a more active reader. Instead, the school psychologist thought about each of the factors described above and decided to go on with an evaluation of phonics.

ACTION 7: EVALUATE PHONICS

Question. The other side of Action 7, as illustrated in Figure 1, is the decision about which other categories of code content should be included in the student's instructional program? This question is illustrated in Figure 16. If a particular category of content is recognized, then that category should be taught.

The school psychologist had already decided to emphasize phonics, so at this point she tried to determine what decoding content to target. She decided to assess sight words, additional decoding errors, and then some sound errors (blending had been ruled out with SLP 1). To assess sight words, she used several sight word probes, and to assess decoding errors she used probes from the Multi-Level Academic Skills Inventory-Revised (MASI-R) (Howell, Zucker, & Moorehead, 2000). She used pseudo-word probes from the MASI-R to assess decoding errors. It was important for her to use pseudo-words so that she could isolate the sound-letter associations Susan needed to learn without concern that Susan had memorized the words. Students can have whole words committed to memory but at the same time lack the skills to deal with some of the letter-sound association within those words. The remainder of the flowchart was passed over because the school psychologist decided she had adequate information to go on to teaching recommendations.

Figure 15. Determine which code elements should be emphasized

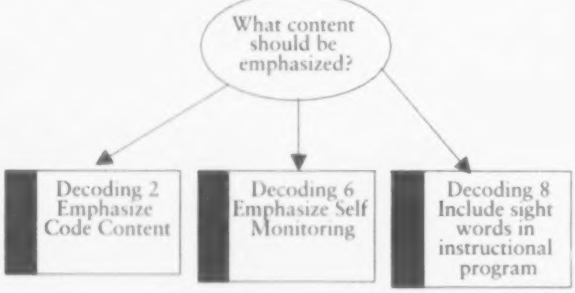

Is phonics justified?
Decoding SLP 7 Evaluate Phonics as needed
Letter sounds
Blending
Sight Words
Clusters
Polysyllabic words
Self-Monitoring
Vocabulary
Cues
Context Cues
Other

Conclusion

The school psychologist reviewed all the assessments that she had completed. By following an evaluation process based on the assumption that Susan was missing knowledge of essential portions of the curriculum, the school psychologist recommended that Susan's teacher use the teaching recommendation labeled "decoding 2." This would allow the teacher to assist Susan on short vowels in combination with silent *e*, vowel teams, and common endings or suffixes (*ed, ing, ler, ly*). The school psychologist pointed out that Susan would benefit from direct instruction in materials that would present these skills in an appropriate sequence (Stein, Carnine, & Dixon, 1998)and further indicated that instruction would need to be followed up with practice aligned with the instruction so that mastery is reached. This same level of material should be used with the teaching recommendation labeled "decoding 8" to provide the practice needed for sight words.

Finally, close monitoring of growth in fluency and accuracy of oral reading would need to be employed to judge the effect of these recommendations.

Figure 16. Determine what type of instruction might be best to start


What content should be emphasized?
Decoding 2 Emphasize Code Content
Decoding 6 Emphasize Self Monitoring
Decoding 8 Include sight words in instructional program

SUMMARY

This chapter has outlined the rationale, and process, of CBE. Most of the chapter was allocated to the presentation of a sample evaluation. Throughout this evaluation the thought processes of the evaluator were displayed to illustrate how one moves through the course of problem solving when working in this model. A flowchart of the decoding decision-making process, which is used daily by those working at the Heartland Area Education Agency, was displayed to help the reader understand the practice. In Figure 17 the same information was supplied without the format of a flowchart. Similar processes have been developed for computation, language, written expression, social behavior, and task-related behavior. In each case the use of curriculum-based thought process, combined with the use of multiple-data sources, has led to evaluation reports of great utility. The principle factor leading to this utility is an assumption. It is that students fail at academic and/or social tasks because of missing knowledge and not because of biological or psychological disorders.

CBE are conducted to determine what to teach and how to teach it. By using tools such as those illustrated in this chapter along with a decision-making framework to guide assessment will enable school psychologists to play a vital role in problem solving and planning for the instructional needs of children.

Figure 17. Precepts of reading evaluation

If: oral reading skills are acceptable	**Then:** go on to comprehension
If: oral reading skills are not acceptable	**Then:** consider the age and accuracy of the student
If: the student is K-2 or an older student who decodes few words	**Then:** check basic decoding skills
If: basic decoding skills are unacceptable	**Then:** focus instruction on the missing basic decoding skills (use decoding 3)
If: basic decoding skills are acceptable	**Then:** use assisted monitoring to see if the student can correct his or her own errors
if: the student is above grade 2 or above and decodes fairly well	**Then:** check to see if oral reading is accurate but slow
If: If oral reading is inaccurate	**Then:** use assisted monitoring to see if the student can correct his or her own errors
If: oral reading is slow but accurate	**Then:** see if the student's rate improves when re-reading
If: the student's rate increased by about 40% on second reading	**Then:** use decoding 4, build fluency
If: the student's rate did not increase by about 40% on second reading	**Then:** elicit an error sample
If: you have used assisted monitoring and found that the student does not correct his or her own errors	**Then:** emphasize self monitoring (decoding 6) through instruction
If: you have used assisted monitoring and found that the student does correct his or her own errors	**Then:** elicit an error sample
If: the student's errors do not increase as the passages get harder	**Then:** use decoding 1, balanced reading instruction
If: the student's errors do increase as the passages get harder	**Then:** categorize Errors
If: there are no patterns to the errors	**Then:** use decoding 1, balanced reading instruction
If: there are whole word error patterns	**Then:** correct the patterns using decoding method 5
If: there are phonics error patterns	**Then:** consider the big picture

(Figure continues on the following page.)

Figure 17. (continued)

If: phonics instruction does not seem indicated	**Then:** use active reading instruction (decoding technique 7)
If: phonics instruction does seem indicated	**Then:** do a thorough evaluation of the student's knowledge of phonic skills
If: there are sound and blending errors	**Then:** emphasize decoding skills (decoding intervention 2)
If: If there are sight-word errors	**Then:** include sight words in the instructional program (using decoding 8)
If: the student seldom self-corrects meaningful errors	**Then:** emphasize self monitoring (decoding 6)

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This is a comprehensive text presenting in-depth procedures for teaching reading. The text has four sections: perspective, beginning reading, decoding, and comprehension. The purpose of a CBE is to link assessment to instruction. This book provides detailed information for instruction in all areas of reading that can be directly linked to CBE procedures.

Good, R., Simmons, D., & Smith, S. (1998). Effective academic interventions in the United States: evaluating and enhancing the acquisition of early reading skills. *Educational and Child Psychology, 21*, 56–70.
This article highlights the area of early literacy and the alignment of assessment, intervention, and meaningful student outcomes. Four areas of reading are addressed including phonological awareness, alphabetic understanding, phonological recoding, and accuracy and fluency with connected text. The Dynamic Indicators of Basic Early Literacy is presented as a method for ongoing assessment of early literacy skills.

Howell, K., & Nolet, V. (2000). *Curriculum-based evaluation: Teaching and decision making*. Belmont CA: Wadsworth.
This book provides the background information necessary to conduct CBE as well as specific decision-making guidelines for the areas of reading comprehension, decoding, language, written expression, math, social skills, and task-related behaviors. A model for developing hypotheses regarding the causes of student difficulties and procedures to validate them is outlined in each area. Interpretation guides are provided with teaching recommendations based on evaluation results.

Reschly, D., Tilly, W., & Grimes, J. (2000). *Special education in transition: Functional assessment and noncategorical programming*. Longmont CO: Sopris West.
This book represents the work of various authors from around the nation who have had direct experience with special education reform. In addition to other pertinent information on functional assessment, chapters are included on noncategorical services for students with severe disabilities and methods for finding solutions to educational problems.

Shinn, Mark. (1998). *Advanced applications of Curriculum-Based Measurement*. New York: Guilford.
CBM is a critical component of a CBE in the areas of reading, math, and written expression. This book provides updated information on the use of CBM within a problem-solving model. Among other topics, assessment of early literacy skills in a problem-solving model is addressed in a chapter written by Roland Good III and Ruth Kaminski.

Tindal, G., & Marston, D. (1990). *Classroom based assessment: Evaluating instructional outcomes*. Columbus, OH: Merrill.

This book provides information on classroom-based assessments that integrate testing and decision making. The book is organized into three areas. First, general measurement concepts are outlined. Next, specific assessment strategies in the basic skill areas are provided, and, finally, three evaluation strategies that compare student performance to peers, a standard, or previous individual performance.

49 Best Practices in Increasing Academic Learning Time

Maribeth Gettinger and Jill K. Seibert
University of Wisconsin-Madison

OVERVIEW

How children spend their time in classrooms continues to be a topic of importance for teachers, school psychologists, administrators, and educational researchers. Recently, researchers concluded that as little as half of each school day may be devoted to instruction in some classrooms, and engagement rates among students may range from as low as 50% up to 90%, depending on teachers' managerial competencies, type of instruction, grouping practices, or individual student characteristics (Hollowood, Salisbury, Rainforth, & Palombaro, 1995).

Interest in learning time can be traced to Carroll's (1963) original model of school learning, which hypothesized that learning is a function of time engaged relative to time needed for learning. The earliest and most extensive research program to examine the relationship between learning time and achievement was the Beginning Teacher Evaluation Study (BTES) (Denham & Lieberman, 1980). The purpose of BTES was to identify teaching activities and classroom conditions that promote student learning. Based on observations in classrooms over a 6-year period, BTES researchers arrived at the concept of *academic learning time* (ALT). Briefly, ALT is the amount of time during which students are actively, successfully, and productively engaged in learning (Fisher & Berliner, 1985). Perhaps the most significant finding from the BTES project was that ALT is a strong determinant of academic achievement.

Among the many variables that contribute to student achievement, ALT has been accorded special significance by educators because of the significance of the BTES findings and because components of ALT are viewed as manipulable facets of classrooms that teachers may be able to control. Research on effective teaching has identified evidence-based practices that strive to maximize learning time for all students (Gettinger & Stoiber, 1999). Given the significance of time as a determinant of learning, the purpose of this chapter is to describe best practices for working with teachers to evaluate, extend, and enhance ALT. The following discussion of basic considerations focuses on (a) defining academic learning time and its constituent parts and (b) describing procedures to assess current levels of learning time and identify classroom practices that contribute to ALT. The section on best practices describes strategies for increasing academic learning time that can be offered to classroom teachers through collaboration, consultation, or inservice training by school psychologists.

BASIC CONSIDERATIONS

As instructional consultants, school psychologists can play an important role in helping teachers modify their classroom practices to maximize academic learning time for students. Best practices for increasing academic learning time are based on two preliminary considerations: (a) an understanding of the components of ALT and (b) assessment of classroom time usage and identification of areas in need of change.

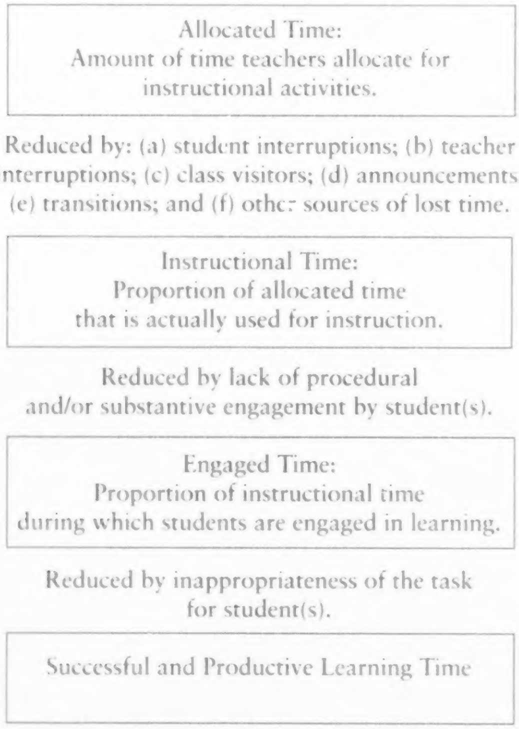
Components of Academic Learning Time

ALT may be defined as the portion of instructional time allocated to a content area during which students are actively and productively engaged in learning (Gettinger, 1995). Four variables contribute to ALT: (a) allocated time, (b) time that is actually used for instruction, (c) engaged time, and (d) academic success and productivity. As Figure 1 illustrates, the process by which allocated time is converted to productive learning time depends on school procedures, classroom practices, and individual differences among students.

Allocated time is the amount of time teachers plan to use or allocate for instructional activities. Allocated time represents the upper limit of in-class opportunities for students to be engaged in learning. Research has documented significant variation across schools and classrooms in the amount of time allocated for instruction (Anderson & Walberg, 1993). Although this chapter focuses on time allocated for instruction *within school*, it is important to note that students in the same classroom self-allocate variable time for learning *outside of school*. For example, one student may self-allocate 20 minutes every day to study spelling words, whereas another may spend only 5 minutes. Over a 5-day period, this results in variable study time across students, ranging from 25 to 100 minutes. Thus, the amount of total allocated time will vary considerably across individual learners, even in the same classroom. Differences in allocated time alone, however, account for a only small portion of the variance in obtained achievement (Gettinger, 1989). Some students simply require more time for mastering content than others. A discrepancy between the amount of time allocated and amount of time needed for learning contributes to low achievement, not allocated time in itself (Gettinger, 1991). As such, the most critical time-allocation issue facing teachers is the need to evaluate and accommodate individual differences among students in the amount of time they require for learning.

Instructional time is the proportion of allocated time that is actually spent on instructional activities.

Figure 1. Components of academic learning time


Allocated Time:
Amount of time teachers allocate for instructional activities.
Reduced by: (a) student interruptions; (b) teacher interruptions; (c) class visitors; (d) announcements; (e) transitions; and (f) other sources of lost time.
Instructional Time:
Proportion of allocated time that is actually used for instruction.
Reduced by lack of procedural and/or substantive engagement by student(s).
Engaged Time:
Proportion of instructional time during which students are engaged in learning.
Reduced by inappropriateness of the task for student(s).
Successful and Productive Learning Time

Studies of time use in schools consistently document that a limited portion of allocated time, between 50 and 60%, is used for instruction (Hollowood et al., 1995). A variety of events typically occur in classrooms that may reduce the number of scheduled minutes that are converted to instructional time. "Lost time" is the amount of time allocated to instructional activities that, for a number of different reasons, is not used toward the completion of those activities. Based on direct observations conducted in eight elementary classrooms, Hollowood et al. (1995) identified six categories of sources of lost instructional time: (a) student interruptions (e.g., disruptive behavior, leaving the room, changing seats, peer conflicts); (b) teacher interruptions (e.g., disciplinary actions, collecting or distributing materials, calling the office); (c) visitors to the class; (d) loudspeaker announcements; (e) transitions; and (f) other sources (e.g., late starts, early dismissals, fire drills).

Engagement rate is the proportion of instructional time during which students are engaged in learning, as evidenced by paying attention, completing written work, or interacting with peers about assigned work. Engaged time includes passive responding, in which students are passively attending to a presentation or task, as well as active responding, in which students are actively responding in a relevant manner to a presentation or task. Even in classrooms where students have an equal opportunity to learn, disparities exist among students in their individual levels of engagement. For example, Wharton-McDonald, Pressley, and Hampston (1998) conducted observations in nine first-grade classrooms of teachers who had been nominated as outstanding in terms of their literacy instruction. Although most students were engaged approximately 80–90% of the time, in some classes, engagement rates were as low as 50%.

Engagement rate is an important time variable; however, it does not impute any particular value to the activities in which students are engaged. The literature has contrasted two distinct forms of student engagement, *procedural engagement* and *substantive engagement* (Nystrand & Gamaron, 1991). Procedural engagement includes observable behaviors, such as paying attention in class and completing assignments. When researchers refer to "engagement rate," they typically mean procedural engagement. Substantive engagement, however, transcends procedural engagement and involves a sustained personal commitment to and engagement in the content of instruction. Although procedural engagement is linked with achievement, academic learning is not possible without sustained, substantive engagement. This distinction between procedural and substantive engagement is important for understanding ALT. ALT depends not only on students' procedural involvement with their schoolwork but also on the nature and quality of schoolwork in which they invest themselves. If students are required to engage in tasks that are not well-matched to their individual characteristics, such as interest, ability level, or background knowledge, then ALT is minimized because substantive engagement is likely to be low. For example, it is possible for students to spend time procedurally engaged in learning activities that are too easy, difficult, uninteresting, or superficial to be of educational value. Therefore, academic success and productivity comprise the fourth important element of ALT.

The *rate of academic success and productivity* reflects the proportion of engaged learning time during which students are performing meaningful and relevant instructional tasks that provide a balance of high and medium success, with more activities targeted at a high-success level. Notwithstanding the need to provide a certain amount of challenging material, research indicates that children gain most from their learning time when they experience a relatively high level of success, about 80% accuracy (Greenwood, Terry, Marquis, & Walker, 1994). That is, students should encounter a preponderance of success in their daily work (e.g., responding to teachers' questions, completing math problems, or practicing spelling words), with the ratio between correct and incorrect responding favoring success by a 4-to-1 margin. Maximizing academic success and productivity depends, to a great extent, on teachers' ability to match learning tasks to individual learner needs in terms of knowledge, skills, and interests.

Although the amount of time teachers allocate (allocated time) and use for instruction (instructional time), as well as the proportion of time during which students are engaged (engagement rate), are all positively correlated with learning, it is the proportion of engaged time that is productive, active and successful that relates most strongly to achievement. In view of the complexity of ALT as depicted in Figure 1, successful efforts to increase ALT are multi-faceted. Specifically, best practices require that (a) teachers maximize their allocations of instructional time and minimize lost time; (b) students maintain high engagement rates, both procedurally and substantively; and, (c) students experience a high level of success on meaningful academic tasks.

Assessment of Classroom Time Usage

The second consideration for school psychologists is familiarity with assessment strategies for evaluating the use of time in classrooms. Best practices for increasing ALT begin with a comprehensive analysis of ALT using the framework in Figure 1. To increase ALT, it is necessary to analyze the constituent parts and then evaluate how time is used or lost within each component. Pursuant to this goal, three assessment strategies are reviewed: (a) self-analysis of time use within an action-research paradigm, (b) ecobehavioral assessment by an external consultant, and (c) functional assessment through collaboration between teachers and consultants.

SELF-ANALYSIS OF TIME USE

The first strategy entails helping teachers analyze their own use of instructional time and target potential areas for change. An action-research approach helps teachers address self-determined issues in their own classrooms, such as the need to increase ALT. It permits ongoing opportunities for teachers to collect data about their own classrooms to guide instructional decisions. When teachers gather data themselves, in the context of their own classroom and focusing on meaningful issues, they are more likely to apply what they learn to their classroom practices (Whyte, 1991).

By using the framework in Figure 1, two types of self-analysis procedures can be conducted to heighten teachers' awareness of their use of instructional time and identify how potential learning time may be lost during the day. The first approach is group-based. In this approach, the school psychologist facilitates discussions among small groups of teachers. Collaboratively, teachers work through the framework in Figure 1, using their knowledge about school operations and estimates of how they allocate class time. Prior to group meetings, teachers are encouraged to maintain personal logs of time usage during a typical one- or two-week period. As a group, teachers begin by placing the number of minutes available in a school day in the top box. Then, they examine common ways that potential instructional time is lost (e.g., recess, transitions, early dismissals). When lost time is subtracted from allocated time, the amount that remains represents available instructional time, and is recorded in the second box. Next, teachers estimate and compare engagement rates in their classrooms across different instructional formats (teacher-led discussion, independent seatwork, etc.), academic domains, and learning tasks to record in the third box. Finally, teachers attempt to construct a profile of overall success among students in their classrooms (e.g., high-, average-, or low-success students) to estimate the proportion of learners for whom ALT is further reduced because the work is too difficult. This mutual analysis of time usage among teachers in small groups provides a forum for collective dialogue on ways of modifying classroom practices to increase ALT. A key feature of action research is the provision of structured opportunities for discussion and sharing of strategies.

The second procedure entails a more extensive, focused analysis of time use within an individual classroom, typically conducted in consultation with a school psychologist. As with the group approach, this analysis relies on the framework in Figure 1. Assessment involves the use of self-monitoring procedures to measure actual time usage in classrooms or for individual students. For example, Paine, Radicchi, Rosellini, Deutchman, and Darch (1983) developed a structured schedule analysis form and step-by-step procedure to help teachers examine how they are using instructional time. For this procedure, teachers construct a written schedule of all classroom activities and compute the percentages of available time they devote to each activity. Activities are then ranked from highest to lowest based on the percentage of time allocated to each one. It is also useful for teachers to rate student achievement and overall student engagement in each curricular area on their schedule. This allows them to determine whether there is a relationship between overall achievement and allocated time and, in turn, whether allocated time reflects the needs of students. For example, if spelling performance is lower than expected or desired, teachers can examine instructional time in spelling relative to other content areas and determine whether the time matches students' learning needs.

Perhaps the most important aspect of self-analysis procedures is when teachers, either in groups or individually, reflect on the extent to which their classrooms are characterized by high or low levels of ALT, and think about what may be facilitating or impeding the accumulation of ALT. In some cases, teachers may conduct a small-scale study in their classroom over a short period to systematically evaluate the effect of an instructional change on students' ALT (e.g., replacing individual oral reading with choral responding for one to two reading lessons and, then, comparing engagement rates). To guide their thinking and encourage reflective practice, teachers may also be directed to respond to specific probes, such as those proposed by Paine et al. (1983). For example, teachers might ask themselves: (a) Do I provide students with frequent opportunities to respond? (b) Does the time I allocate to activities match students' needs? (c) Am I successfully managing transition times? (d) Have I ensured that all students work on materials that are appropriate for their skill level? (e) Does my schedule minimize organizational time?

ECOBEHAVIORAL ASSESSMENT

The second assessment approach, which relies on consultants or classroom observers, is to collect data on classroom variables, engagement rates, and success levels among students through systematic, direct observation. One observational method for studying academic engagement within the context of classroom and teacher variables is *ecobehavioral assessment* (Greenwood, Carta, & Atwater, 1991). The primary focus of ecobehavioral assessment is on active student responding. This approach is used to identify naturally occurring variables that are associated with high versus low levels of engaged behaviors. Although student engagement is not a direct measure of learning, it is positively correlated with achievement for students, both with and without disabilities. The goal of ecobehavioral assessment is to observe student engagement, a proxy for learning, over multiple activities, instructional arrangements, and teacher behaviors to arrive at an understanding of variables that are associated with high engagement. Although a number of different procedures may be used to complete an ecobehavioral assessment, the most frequently used systems are based on the *Code for Instructional Structure and Student Academic Response* (CISSAR) (Stanley & Greenwood, 1981). Classroom observers, using the CISSAR, collect data on the classroom context (e.g., activity, materials, instructional grouping), teacher variables (e.g., behavior, instructional focus), and academic responding among students. Unlike the self-analysis methods described, direct observation approaches employ complex codes that have the disadvantage of requiring independent classroom observers, but have the advantage of offering detailed information about classrooms, teacher behaviors, and student responding.

FUNCTIONAL ASSESSMENT

The third procedure for evaluating classroom time usage is functional assessment. Functional assessment is a direct method for examining relations between classroom performance and features of the instructional environment. A functional-assessment approach relies on collaboration between teachers and school psychologists, and involves three phases: (a) observing and describing the educational environment (e.g., task, materials, instruction, organization, etc.) during periods of high and low ALT; (b) generating hypotheses about the relation between ALT and the instructional context; and (c) testing hypotheses using experimental functional analysis, or a systematic manipulation of variables that contribute to ALT (Daly, Witt, Martens, & Dool, 1997).

A functional-assessment approach may be used to examine ALT for an entire class or an individual student. To implement functional assessment, the teacher or school psychologist conducts observations during instructional periods when academic performance and student engagement are low, as well as during periods when performance and engagement are high. Based on collective observations, teachers and consultants develop hypotheses about the sources of high versus low ALT and, based on these hypotheses, make modifications in the classroom structure or delivery of instruction to maximize ALT. To illustrate this procedure with an example: A teacher noted that students were struggling with science. The school psychologist observed during two to three science periods. Students spent approximately 40% of the instructional period moving between the front of the classroom, where directions for the science activity were written on the board, to the back of the room, where science materials were located, and then to their seats, where they were expected to write in their science journals. The school psychologist also noted a high level of off-task behavior during the time that students were making these transitions. Based on additional observations during more productive instructional periods, the psychologist and classroom teacher developed the hypothesis that low ALT was linked to the organization and location of critical components for science activities (directions, materials, and journals). To test this hypothesis, prior to the next science lesson, the teacher printed directions for the activity on a page and separated materials (i.e., different types of rocks) into individual bags for students to keep at their desks. The teacher and school psychologist, then, monitored student engagement during the science period as well as learning outcomes (e.g., quantity and quality of journal entries; accuracy of student responding to teacher questions). Both performance and engagement improved when these modifications in the structure of the science lesson were implemented. In sum, school psychologists can initiate teachers' thinking about instructional time through an analysis of the four components that comprise ALT by using the framework in Figure 1. Working from evaluations of current time use, based on self-analysis, classrooms observations, or functional assessment, school psychologists are in a position to provide individual consultation or inservice training to assist teachers in increasing students' ALT.

BEST PRACTICES

Research on the relationship between learning time and achievement supports the recommendation that teachers should be encouraged to incorporate teaching methods and classroom practices that maximize ALT. Using assessment information (e.g., classroom time-use logs, observational data), school psychologists can provide individual consultation or direct training to assist teachers in increasing ALT. Strategies for increasing student learning time have been derived from over 25 years of research on effective teaching. Because increases in student engagement covary with gains on both Curriculum-Based Measures and standardized tests, effective-teaching research has used ALT as an outcome variable to determine the effectiveness of instructional practices.

Effective-teaching research may be organized into three broad categories depending on the research paradigm. These include (a) a process-product paradigm, which examines the relationship between teacher behavior and student engagement; (b) a classroom-ecology paradigm, which considers the structural and organizational features of classrooms that are associated with student engagement and learning; and (c) a mediating-process paradigm, which focuses on cognitive-behavioral activities that mediate the relationship between teacher behavior or classroom structure and student engagement. All three strands of instructional research have contributed to our understanding of the teaching-learning process and to knowledge of best practices for increasing ALT (Gettinger & Stoiber, 1999). Consistent with these paradigms, best practices for increasing ALT are discussed in terms of three types of recommendations, as shown in Figure 2. Best practices address: (a) teacher behaviors, (b) structural arrangement of classroom environments and learning situations, and (c) student-mediated strategies.

The following sections describe practices that are intended to serve as guidelines for school psychologists in their role as classroom consultants. Not every procedure may be effective or efficient for all classrooms and teachers. Because of individual teaching styles and classroom arrangements, school psychologists must work collaboratively with teachers to analyze time use, target areas in which learning time can be increased, identify students whose ALT is below average, and develop strategies that are tailored to teachers' individual styles and individual learners' needs. A critical role for school psychologists is to facilitate teachers' utilization and, when necessary, modification of these procedures in their classrooms. Teachers should always be encouraged to modify methods based on their own experiences. Furthermore, teachers constantly need to monitor their own behavior and its relationship to students' performance to refine, personalize, and develop methods that are maximally effective in increasing ALT.

Process-Product Research Paradigm: Interactive Teaching Behaviors

Teacher behaviors and instructional management strategies have an impact on student behavior so as to promote ALT. Collectively, these behaviors reflect what has been termed a directive or *interactive teaching style*. Interactive teaching encompasses multiple teaching behaviors that are associated with high levels of ALT. (See Figure 2.)

Figure 2. Best practices for increasing academic learning time within three research paradigms

Process-Product Research Paradigm:
Interactive Teaching Behaviors

Academic focus
Interactive instructional activities
Active academic responding
Teacher-selected activities
Student-teacher interactions
Delivery of instruction
Classroom management strategies
Proactive planning

Classroom-Ecology Research Paradigm:
Structure of Learning Activities

Adaptive instruction
Integrated curriculum approach
Flexible grouping practices
Physical arrangement of classrooms

Mediating-Process Paradigm:
Student-Mediated Strategies

Cognitive strategies
Self-monitoring
Self-management

The primary characteristic of interactive teaching is a strong *academic focus*. Academic focus is reflected in the amount of time devoted to academic versus nonacademic activities and in the type of instructional interaction that prevails in the classroom. According to Good and Brophy (1996), classrooms with a strong academic focus share the following characteristics: (a) systematic, teacher-structured activities; (b) lessons and content related to attaining specific goals; (c) rapid pacing of lessons; (d) ready availability of teaching materials; (e) high levels of student participation and responding; (f) student accountability for homework; and (g) frequent monitoring of students' performance through weekly and monthly tests.

The nature of teaching activities is also related to ALT. Not all academic activities are of equal instructional value. *Interactive activities*, such as discussion, review, or reading aloud, are more strongly related to ALT than non-interactive activities, such as silent reading or completing independent seatwork. Spending more time in interactive instructional activities may be initiated after teachers analyze their classroom activities and consider ways to modify activities to be more interactive. For example, math problems might be solved collectively by small groups of students rather than individually as an independent seatwork assignment.

Another important aspect of interactive teaching is the nature of children's participation in learning activities. *Active academic responding* by students is related to high levels of ALT. Active responding involves children's practicing academic tasks, such as answering a question, reading a text, or performing the steps in solving a problem. Incorporating some element of active student responding into every learning activity and encouraging responses from all students during group lessons and discussion can increase ALT.

Again, a careful analysis of classroom tasks might reveal how active responding can be built into activities. For example, students could be encouraged to ask questions and respond to answers from peers as well as answer their classmates' questions, rather than having the teacher do so. Beyond fostering active participation, this strategy allows students to practice good listening skills. Furthermore, active responding affords the teacher numerous opportunities to monitor students' progress and provide corrective feedback about their performance.

Interactive teaching involves a high level of *student-teacher interaction*, which is also associated with high levels of ALT. As the teacher interacts with and directs questions to students, it is important that all children be given an opportunity to participate, not just those who are eager to respond. Low-functioning students, for example, may accrue lower amounts of ALT because of fewer student-teacher interactions and fewer opportunities to respond.

Many teachers state that maintaining interaction and engagement among all students during whole-class discussions is one of the most difficult aspects of interactive teaching. An effective questioning technique to maintain engagement is to direct questions to students randomly or in ordered turns, moving in sequence among all children in the class. Reshuffling and cycling through a set of index cards with students' names ensures that students are called on during question-and-answer periods. Random selection in calling on students has the effect of keeping students attentive, particularly if the teacher occasionally returns to a student who has recently answered a question.

Another recommendation for maintaining engagement during student-teacher interactions is to wait at least 5 seconds before providing a correct answer to a question or calling on another student to respond. To make teachers aware of "wait time," school psychologists should ask teachers to consider a typical question they might pose to students during instruction, then silently count to five to experience a 5-second wait. If teachers want to maintain students' engagement and increase willingness and ability to answer questions, then the teacher must provide all students adequate time to answer. When teachers fail to provide sufficient time for responding, students learn they can remain uninvolved simply by failing to respond immediately. Another aspect of student-teacher interaction is feedback. Children perform better and maintain high levels of ALT when they receive frequent performance feedback. Feedback that is characterized by specificity and academic relevance maximizes ALT. Information given to students about their performance should indicate whether responses are correct or incorrect, and provide specific suggestions for rethinking or redoing the work.

A number of procedures related to the actual *delivery of instruction* within an interactive teaching approach also influence ALT among students. For example, instructional time is lost in classrooms when teachers have difficulty obtaining students' attention and getting started on lessons, or making smooth transitions between activities. Several strategies can reduce the amount of time needed to start new activities. One strategy is to select a discriminative stimulus or cue that foreshadows a transition to a new activity. The phrase or cue can be thematic, may vary every month, and can be selected by the students themselves. In one third-grade classroom, a teacher used concepts from a science unit on sea animals and plants to cue classroom instructional transitions. For example, she used the cue, "Time to go deep-sea fishing," to signal that the class was ready for independent seatwork, and the cue, "Time to surface," to direct children to conclude their independent work and come to the rug for whole-class discussion. Teachers should record the time it takes students to pay attention following the cue and to monitor the reduction in the amount of time needed across weeks. Children can be challenged to reduce the time it takes the class to get ready for a lesson from the previous time. Another guideline is to wait to begin instruction until everyone is paying attention to prevent having to repeat content or directions for completing work. The amount of time targeted for students to "get ready" should be optimal, allowing slower students sufficient time to attend while maintaining readiness among the faster ones.

Another recommendation related to the delivery of instruction is to stimulate interest in new content by relating it to a previous lesson or experience, or starting with a motivating activity to make the initial contact with the lesson positive. Students' engagement in tasks can be heightened by indicating why the material is being learned and by suggesting ways in which the new learning may be related to other events or experiences in their lives.

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Classroom management strategies designed to conserve instructional time is another component of interactive teaching. The best management strategy for non-instructional transitions is to instill awareness in students of classroom rules and procedures for such activities. Teachers with well-managed classrooms invest considerable time, particularly early in the year, teaching students the routines necessary for smooth classroom operation.

Finally, interactive teaching includes *proactive planning*. Proactive planning includes all steps a teacher takes to be prepared to deliver a lesson. The first step is to develop clear goals and objectives for instruction; that is, what students are expected or desired to learn. Once goals and objectives are established, the method of instruction must be determined (e.g., large-group versus small-group, teacher-directed versus student-directed). After deciding what to teach and how to teach it, the next step is to communicate goals and expectations to students. Effective communication includes giving precise instructions that clearly describe the goals of the lesson, activities to be completed by students relative to their goals, and evaluation procedures.

A significant amount of lost time often results when students do not understand how they are to proceed with assigned tasks. To ensure that students understand instructions, teachers can ask students to paraphrase the directions and self-identify problems that might occur in understanding or following directions. In addition, whenever possible, directions should be written and placed where they can be seen and referred to by students as needed. It may also be necessary to distribute outlines, definitions, or study guides to help students organize their thoughts and focus their attention on lessons or assigned work. Before presenting a lesson, teachers can also brainstorm potential problems that could result in loss of ALT. Problems might be academic (What will I do if students have trouble understanding a concept?), behavioral (What will I do if students are off task?), or administrative (What will I do if some students do not have their materials?). Once trouble spots are identified, the teacher can then generate workable solutions. The more prepared a teacher is to address problems, the more time available for students to be actively engaged in learning.

In summary, interactive teaching occurs when the teacher assumes a central, active, and directive role in the instructional process. Teachers who emphasize academic goals and display high levels of involvement with students on learning tasks generate high levels of ALT. The teacher selects the academic activities and leads students through academic tasks to accomplish goals and objectives. There is a high level of student-teacher interaction, most of which is initiated by the teacher. The majority of instructional time is devoted to the teacher's presentation, explanation, and demonstration. Practice, feedback, questioning, and review of activities also figure prominently in daily instruction. The teacher monitors student progress and provides corrective feedback. The teacher holds and conveys high expectations for student performance and provides students with many opportunities to experience success. Finally, planfulness, clarity of directions, praise, and feedback are all associated with high levels of ALT.

Classroom-Ecology Research Paradigm: Structure of Classrooms and Learning Situations

Increasing ALT also requires restructuring and reorganizing classrooms that extend beyond individual teacher behaviors. Several approaches have been shown to promote high levels of ALT and achievement among diverse students. Collectively, these strategies are called *adaptive instruction*. Adaptive classrooms are designed to accommodate a wide range of individual differences among students. Conceptually, adaptive instruction is a two-way enterprise between the classroom environment and the students. Efforts to adapt to student diversity have a dual focus: (a) structure the learning environment to accommodate students' needs and (b) provide students with independent learning strategies to improve their capability to adapt to the demands of the classroom. Three adaptive strategies for restructuring classroom learning are described: (a) integrated curriculum, (b) flexible grouping, and (c) physical arrangement of classrooms.

The recommendation for an *integrated curriculum strategy* emerges from the lack of adequate time for content-area teaching that often occurs, particularly in the upper elementary grades. Lack of instructional time is a limitation to improving the quality of instruction in areas such as science and social studies. For example, with restricted instructional time, many elementary science programs include only assigned reading activities in science textbooks. Educators attribute negative attitudes displayed by students at the secondary level toward content areas, such as science and history, to lack of in-depth instruction in elementary school that includes hands-on activities. At the same time, educators stress the importance of content-based reading activities as vehicles for developing applied reading comprehension and thinking skills, but they also acknowledge the limited amount of instructional time available for such activities.

An integrated curriculum strategy that teaches applied reading skills across a range of content areas is one approach to circumvent this problem; that is, to increase ALT in content-area reading while providing sufficient time for in-depth thinking activities. The goal is to improve the quality of both content-area and reading instruction within an integrated time frame that reallocates the combined instructional time assigned to all curriculum areas. For example, Romance and Vitale (1992) described an integrated curriculum strategy designed to increase the time allocated for in-depth science teaching by replacing the district-adopted basal reading program with science-content-based instruction that concomitantly facilitated reading comprehension skills. They found that ALT in both science and reading activities increased for students as did achievement, attitudes toward science and reading, and academic self-confidence.

Flexible grouping practices also allow teachers to maximize ALT for all students. Whole-class instruction has the potential for enhancing engagement because the teacher is able to monitor and foster active responding among all students at one time. Whole-class instruction, however, may not provide individual students with sufficient opportunities to respond, or with material at an appropriate level of difficulty to ensure a high success rate necessary for ALT. Individual seatwork, on the other hand, lends itself to providing high levels of student success, but it may minimize students' engagement. Furthermore, individual teaching and learning activities do not always represent the most efficient use of allocated instructional time. Teaching students in small groups or having students work cooperatively in groups can circumvent some of the problems inherent in individual or whole-class teaching.

The key to grouping practices that are successful in increasing ALT is flexibility. Membership in groups should change on the basis of specific needs of students and the nature of the learning activity. Decisions about grouping for instruction are important because of the management implications and instructional impact. For example, heterogeneous grouping arrangements foster high levels of engagement in activities that are designed to be cooperative; that is, activities in which students coordinate their individual skills and efforts to achieve a group goal. Typically, exploratory tasks lend themselves to heterogeneous grouping. These tasks are designed to foster social development and enrich or apply basic skills, such as playing games or solving problems. For group activities to maintain a high level of student involvement, tasks must be selected to allow each student to function as a contributing member. Every student needs the opportunity to be both challenged and successful on the learning task, which may require adding easier or smaller components for low-ability students as well as adding more difficult or complex ones for high-ability students. Homogeneous grouping, on the other hand, allows students to work on material according to their achievement level and pace. Homogeneous grouping arrangements allow the teacher to provide assistance geared to the level of students in the group, thus maximizing their ALT. Prescriptive tasks are more appropriate for homogeneous groups, such as completing independent seat work problems, receiving teacher-directed explanations, or being tutored in basic skills.

Another grouping practice that results in high levels of ALT is peer tutoring. In this grouping structure students take turns serving as tutors (who evaluate and provide feedback about responses) or tutees (who respond to academic prompts). An effective method of class-wide peer tutoring has been developed by Greenwood, Delquadri, and Carta (1997). This method involves pairing students for reciprocal tutoring, changing partners regularly, providing immediate feedback and correction of errors, and using team reinforcement contingent upon performance. When students are engaged in peer tutoring, half the class provides an answer while the other half evaluates the answer, keeping all students consistently engaged in the task. To implement an effective peer tutoring program, teachers must carefully select instructional content, provide students with clear instructions, and monitor student understanding. When implemented correctly, peer tutoring increases student engagement across academic subjects, providing benefits to tutors and tutees (Skinner, Shapiro, Turco, Cole, & Brown, 1992).

In sum, grouping children to maximize ALT, particularly children with academic problems, should reflect teachers' knowledge of engagement patterns in their classrooms and how to make the best use of instructional time. Each grouping option impacts differently on students' engagement. Whole-group instruction may be easiest to manage because the teacher can supervise all students at one time. Small-group instruction and peer tutoring entail greater planning and management skills, but they are more effective in engendering high levels of interaction. Finally, individualized instruction facilitates matching instruction to each child's needs and skill level to maximize success rate. Efforts to increase ALT reside in the application of grouping practices according to the particular needs of students.

The third structural approach to increase ALT relates to the *physical arrangement* of the classroom. Classrooms should be arranged in a way that matches the typical grouping practices and instructional method. For example, if a teacher regularly engages in whole-class instruction, then arranging desks in groups so that some students must turn around in their seats to see the board is not the best arrangement. Another consideration when arranging a classroom is the flow of traffic within the room. To provide students with prompt feedback and minimize disruptions teachers must have easy access to all areas of the classroom. A well-organized classroom allows a teacher to monitor all students from anywhere in the room and has direct routes across the classroom so teachers can quickly redirect students who are off-task. When examining the flow of traffic, placement of both high traffic and quiet areas is important. High traffic areas, such as supply shelves or pencil sharpeners, should be placed away from student work areas. Time-out or quiet areas should be separate from the group, but not completely isolated. It is important for teachers to be able to monitor students in these areas while continuing to work with other students in the classroom. Physical arrangement of the classroom can reduce the amount of ALT lost to disruptions and off-task behavior.

Mediating-Process Paradigm: Student-Mediated Strategies

Whereas best practices for increasing ALT based on the process-product and classroom-ecology paradigms emphasize instructional and managerial strategies external to the learner, the mediating-process paradigm focuses on within-learner or cognitive variables that maximize ALT. Consistent with Carroll's model, research has shown that student learning is a function of the discrepancy between the amount of time available for learning and the time students actually spend engaged with the content of instructional activities (Gettinger, 1989). Even when teachers consistently implement best practices for maximizing ALT, students may spend less time than needed or less time than what is available because of low motivation, low self-efficacy, or lack of self-monitoring skills. Furthermore, although students may appear to be actively engaged in learning, their ALT may not be optimal because they employ ineffective learning strategies or may have difficulty allocating attention efficiently to information within tasks. Therefore, best practices for increasing ALT include not only procedures to improve how teachers allocate and structure available time (instructional efficiency) but also methods that focus on how students use instructional time (cognitive efficiency).

According to the mediating-process perspective, time use is linked to students' use of strategies for planning and organizing their learning time and monitoring cognitive engagement. Cognitive engagement requires some degree of self-regulation of learning and performance among students (Zimmerman, Greenberg, & Weinstein, 1994). To maximize cognitive engagement, students may require training in learning strategies, self-monitoring skills, and self-management behaviors. Unlike best practices that emphasize teaching practices or classroom organization, these student-mediated procedures involve individual students in the regulation of their own ALT. This mediating-process research paradigm emphasizes cognitions as mediators of ALT. Best practices evolving from this paradigm focus on how to develop the metacognitive skills students need to regulate their ALT effectively rather than relying on conditions of the environment of instruction to produce ALT. Within this paradigm, there are specific strategies designed to help students control their own ALT.

The first component of a student-mediated approach for maximizing ALT is students' *acquisition and use of strategies* for using study time efficiently and managing time effectively. According to Pressley and his associates, effective strategy instruction involves four elements: (a) providing students with knowledge about strategies to promote cognitive engagement during learning tasks and how to use them, (b) demonstrating how and when utilization of strategies is appropriate for maximizing the efficiency of learning time, (c) providing feedback on the appropriate use of strategies, and (d) providing instruction concerning when and why strategies should be used and how strategy use can enhance their learning time (Pressley et al., 1995). The systematic application of strategy training as part of classroom instruction can increase ALT. If students are taught to approach learning tasks in a structured, organized fashion, then they will be more efficient with their learning time. By facilitating students' ability to organize information more efficiently, strategy training also increases the probability of correct responding and active engagement during learning activities. For example, the use of strategies, such as story-mapping or question-generation, during individual reading periods enhances learning and retention of material because students are cognitively engaged and actively interacting with the text while they read (Wood, Woloshyn, & Willoughby, 1995). Similarly, performance improves when students are taught to use a systematic error-correction procedure during the time allocated for individual study of spelling words. Again, it is hypothesized that an error-correction strategy increases active engagement and success during the allocated learning time (Graham, Harris, & Loynachan, 1996). It is widely accepted that active learning strategies increase students' regulation of their own learning and ALT. Although beyond the scope of this chapter, there are several empirically supported approaches to strategic learning (see, for example, Pressley et al., 1995; Wood et al., 1995).

The second component of student-mediated strategies is *self-monitoring*. A key self-regulative variable within the mediating-process paradigm is the quality of students' cognitive monitoring. If students do not realize they are not learning, then they will not plan or adjust their time use appropriately. There is evidence that students may fail to monitor their learning and self-regulate their use of learning time, even when they are motivated to learn or when instruction has been delivered so as to maximize ALT (Stipek, 1998). Research has provided information about ways in which students can be taught to self-monitor their learning time more effectively and, in turn, maximize their ALT. These procedures directly involve students in regulating their own ALT and focus on active thought processes that enhance learning.

One example of self-monitoring is the use of self-correcting techniques. Several types of self-correcting materials have been shown to be effective, including flash cards, answer tapes, overlays, or checking stations. Another method to help children monitor their own learning time is to have them keep a personal log of time use, including the duration of study time, frequency of engaged behaviors (e.g., answering questions, writing responses), task completion, or overall level of performance. Kern, Dunlap, Childs, and Clarke (1994), for example, increased engagement by having children record on sheets placed in the corner of their desks whether they were or were not "on task" at signaled intervals. Methods as simple as touching a child on a shoulder can also be used as cues. Self-recording has been found to significantly influence children's behavior, including their levels of ALT.

A third component of student-mediated methods for increasing ALT is *self-management*. If given proper training and supervision, then students are capable of assuming a high degree of autonomy through the use of self-management procedures. Furthermore, self-management techniques result in increased learning and ALT (Shapiro & Cole, 1994). Self-management strategies contribute to students' independent functioning in the classroom. To manage the range of ability levels among diverse learners and enable each child to accrue maximum ALT, a systematic approach for the development of independent learners is often necessary. For example, even young children can be taught directly to guide themselves through much of their day with minimal assistance from a teacher and with minimal loss of engaged learning time (Jones & Jones, 1998). There are several best practices for teaching students to become independent learners. For example, teaching students a systematic task approach can be accomplished by using a step-by-step sequence that helps children structure their learning behavior. This may consist of having students ask themselves a series of questions listed on individualized job cards (e.g., What materials do I need? How much time do I have?). Before beginning a task, students use their job cards to determine what needs to be done and whether they have the knowledge, skills, materials, and time to complete it. Overall, self-management enables students to take an active role in managing and maximizing their own learning time.

SUMMARY

Academic learning time is one of the most important correlates of achievement, and its linkage with learning is one of the most consistent findings in educational research. During the past 25 years, much has been learned about maximizing the amount of academic learning time that students experience. This continuing focus on learning time has important implications for school psychologists. First, it is incumbent on psychologists to ensure that classroom teachers have an awareness of the importance of ALT and its relationship to student achievement. Second, school psychologists can facilitate classroom-based or school-wide assessment of time use, as well as the identification of areas to target for improvement in order to maximize learning time. Finally, through consultation, collaboration, or inservice training, school psychologists may help teachers acquire and implement more effective classroom practices to increase students' ALT. Assisting teachers and schools to manage instructional time effectively is important to increasing ALT and improving academic performance for all students.

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This book divides instruction into four parts: planning, managing, delivering, and evaluating. Within each area the authors provide easy-to-use, research-based approaches for improving instruction and increasing learning time for students.

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The purpose of this book is to help teachers of students with special education needs to examine their own teaching to look for ways to improve effectiveness and learning time. In addition to reviewing research related to time and learning, the author provides many practical applications of findings, including strategies for conserving instructional time and enhancing academic learning time among students with learning problems.

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This book provides teachers with step-by-step methods for developing classroom routines. The development of classroom routines can reduce the amount of learning time lost to administrative tasks and disruption. In addition to providing teachers with explicit instructions for developing and maintaining classroom routines, the book contains examples and useful reproducibles.

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Best Practices in Preventing Academic Failure and Promoting Alternatives to Retention

Mary Ann Rafoth
Indiana University of Pennsylvania

OVERVIEW

National attention was refocused on the issue of retention of students in grade when President Bill Clinton called for an end to "social promotion" in his 1998 State of the Union address. Logic would appear to dictate that if there is a national call to stop sending students who do not meet specific standards on to the next grade, then there must also be a national mandate to retain those unprepared students at their current grade level. However, both the practices of retention and social promotion have come under increasing fire from researchers, politicians, and educators in recent years. The National Association of School Psychologists (NASP) has found both to be "failed practices."

NASP encourages instead more effective diagnostic assessments and individualized teaching to identify learning problems and more resources to address these problems (National Association of School Psychologists, 1998). NASP argues that the cost of effective prevention and remediation are far less than the estimated $6,000 a year cost per child of retention or the cost of socially promoting a child without needed skills. Nevertheless, effective interventions before students experience serious failure in the classroom are more easily talked about than put into place. So, even though there was no suggestion that simply retaining students would be beneficial, many school districts, particularly large urban centers (e.g., New York, Chicago, Detroit, Houston) began to institute policies that were destined to increase the number of students retained dramatically. These changes took place even after a decade of analysis of research and debate had largely concluded that retention was a costly and ineffective intervention.

Now school systems grapple with what to do with large numbers of students who fail to meet standards that were set as benchmarks for promotion to the next grade. Meanwhile, individual teachers and parents continue to struggle with issues of delayed entry and retention such as the following: A preschool teacher tells the parents of a 4-year old boy with a birthday just before the school cutoff date that they may want to have him spend another year in preschool before facing the demands of public kindergarten. It is recommended to parents of a first grader that their daughter be retained in first grade—because she's slow picking up reading and appears younger than her classmates. A teacher recommends that a boy in fifth grade repeat the year because, while he appears bright and capable of doing the work, he has done very little in class and has handed in virtually no homework assignments. A group of eighth-grade teachers draws up a list of students they feel have not mastered the academic skills necessary to proceed to high school. Many of the students have already repeated one year in school; most are boys from lower socioeconomic classes who have been placed in the lower tracks since early in elementary school. A high school sophomore with frequent absences from school is forced to repeat tenth grade because she failed to accumulate sufficient credits to enter the eleventh grade.

Every year, approximately 2.4 million U.S. students are held back in school, many under circumstances similar to those described above. The percentage of students retained has shown a steady increase over the last 25 years (U.S. Department of Commerce, Bureau of the Census, 1966, 1990, cited in Alexander, Entwisle, & Dauber, 1994). Minority youth and boys, especially if they live in poverty and their parents did not finish high school or they lack a college education, are more frequently retained; that is, over half of African-American boys and 49% of Hispanic boys are old for grade by age 14 (Alexander et al., 1994; U.S. Department of Commerce, Bureau of the Census, 1992, cited in Roderick, 1995). Yet, research on the efficacy of retention continues to indicate that this is a failed strategy to remediate academic problems.

Frequently, school psychologists are involved in making individual retention decisions or influencing the policies of their school districts. For the most part, retention is of questionable educational benefit and may have negative effects on achievement, self-concept, school dropout rates, and high-risk behaviors in adolescence. The general public and even many teachers continue to believe in its efficacy, however. Many teachers and school administrators continue to see retention as a positive practice that acts to lessen daily school failure and to motivate students to work harder (Tanner & Combs, 1993; Tomchin and Impara, 1992).

This chapter provides the school psychologist with a brief review of the research on student retention as well as discussion of the main causes of academic failure that lead to retention at different points in a student's school career. The concluding section will address the role school psychologists may play in helping school districts move to systemic approaches to preventing academic failure, avoiding decisions about retention, and alternatives to retention that may better meet the needs of students experiencing failure at school. Of the many professionals involved either in developing district-wide retention policies or in making retention decisions about individual students, the school psychologist is uniquely qualified to act as a consultant in generating alternatives. School psychologists should help to evaluate the reasons for school failure, plan appropriate instructional programs for the following year whether or not the child is retained, and act as consultants both to parents faced with retention decisions and to their school districts in developing programs that are viable alternatives. Best practices regarding non-promotion center on a thorough understanding of the research and careful consideration of the needs of the individual student. Best practices regarding avoiding academic failure center around systemic responses to the main sources of failure for students at key grades: failure to learn to read in the primary grades; inability to organize, study efficiently, and learn independently in middle school; and loss of motivation in high school.

BASIC CONSIDERATIONS

Retention or non-promotion is the practice of requiring a child to repeat a particular grade or requiring a child of appropriate chronological age to delay entry to kindergarten or first grade. With the introduction of graded schools in the nineteenth century, retention emerged as a response to the problem of students unprepared for the academic demands of the next grade. While concern about possible negative effects of retention has been expressed since the 1930s, the practice appears to be on the increase. Little research exists to validate its effectiveness (Holmes & Matthews, 1984; Jimerson, 1999; Jimerson, Carlson, Rotert, Egeland, & Sroufe, 1997; Mantzicopoulos & Morrison, 1992; Medway & Rose, 1986; Reynolds, 1992; Shepard & Smith, 1990). Only one major study, *On the Success of Failure*, by Alexander et al. (1994) appeared to support the use of retention at least in the higher grades. This study suggests little reason for retention upon close examination, however. Only a continuous skill degradation among low-achieving students appears to have been halted by retention, and even this effect may have been an artifact of the research design (Dawson, 1998). Additionally, other research published in the medical literature suggests that adolescents who are old for grade are at much greater risk for a variety of problem behaviors including smoking, chewing tobacco, drinking alcohol, driving with someone who is drinking, using alcohol or other drugs before sexual intercourse, and using drugs (Byrd, Weitzman, & Doniger, 1996). Similarly, in 1997 issues of *Pediatrics* (Byrd, Weitsman, & Auinger, 1997) and the *Journal of the American Medical Association* (Resnick et al., 1997) contained articles that examined students who were old for grade (regardless of reason). Both found that higher rates of behavior problems were reported in this group. The use of statistical techniques such as meta-analysis and causal modeling has helped overcome the weaknesses of individual studies and the use of larger databases have established more definitive relationships between retention and later achievement and social growth. In addition, there appears to be increasingly clear evidence that being old for grade is itself a risk factor.

Kindergarten and Elementary Level

Children are often recommended for retention at the kindergarten level because they have failed to acquire basic readiness skills and are not progressing in reading. Sometimes these determinations are made because of poor performance on a readiness test administered before entry into kindergarten or at the end of the year. Failure to display skills, particularly in reading in the classroom, coupled with low achievement scores is often the reason a child is suggested as a candidate for retention after completing a year of kindergarten or first grade. Some children enter kindergarten with little exposure to academics, the school routine, or prerequisite skills such as letter and number recognition, which are typically taught in most preschools. Children from home backgrounds in which such exposure is limited may find themselves candidates for delayed entry into kindergarten or retention. Again, most likely to be retained in kindergarten are African-American or Hispanic boys who are chronologically young for grade, developmentally delayed, and living in poverty. On the other hand, children who attend Headstart are less likely to be retained (National Household Education Survey, cited in Zill, Loomis, & West, 1997).

Delayed entry or retention at the kindergarten level also occurs because some children are judged to be "developmentally immature." These children seem to be slightly delayed in social, motor, and/or readiness skills and in need of a year to grow or mature neurologically and thereby catch up with their peers. Likewise, children who are physically small or relatively young compared with their peers (because of cutoff dates for school entry) are often candidates for delayed entry or retention. Many parents and teachers believe that the extra year will allow the child, especially if the child is a boy, to compete more effectively with peers the following year (Mergendollar, Bellismo, & Horan, 1990). However, Laidig (1991) found that delayed entrants to kindergarten, when compared to children who started school on time, had significantly lower scores on standardized achievement tests in senior high school with ability controlled for in the analysis. Delayed entry has also been associated with a higher rate of involvement in high-risk behaviors in adolescence.

While late-birthdate children who are retained or held out of school for a year initially may do better than those enrolled in first grade at the prescribed age, longitudinal studies show that initial achievement gains do not hold up over time or remain very slight (Cameron & Wilson, 1990; Crosser, 1991; Kundert, May, & Brent, 1995). For instance, Miller and Norris (1967) divided first graders into three groups based on age at school entrance. They found significant differences between young, middle, and old first graders on three of six readiness measures. At the end of 4 years, however, the average achievement of the young group did not differ significantly from the average achievement of the middle group. Similarly, research suggests that retention in kindergarten or first grade may be associated with poorer academic and social functioning throughout the elementary grades and even into young adulthood (Alexander et al., 1994; Jimerson, 1999; Jimerson et al, 1997; Mantzicopoulos, 1997). Differences in achievement related to age exist to some extent in elementary school but tend to diminish and even disappear by middle school. Additionally, May, Brogan, and Knoll (1993) found no relationship between the children's birth dates and later classification as handicapped. Profiles of children who are retained in kindergarten indicate that they have multiple deficits and needs, making it unlikely that simple exposure to the same curriculum would be an effective intervention (Alexander et al., 1994; Mantzicopoulos, Morrison, Hinshaw, & Carte, 1989).

Many schools have adopted transitional or developmental programs for children "not ready for first grade." However, those programs appear to be no more effective than retention (Dennebaum & Kulberg, 1994; Ferguson, 1991; Ferguson & Streib, 1996; Gredler, 1992; Mathews, 1977; Talmadge, 1981). Zinski (1983) found no significant differences between children who attended a transitional program between kindergarten and first grade at the end of first grade and children who repeated first grade. Gredler (1983) reviewed seven studies that investigated the effects of transition room placement and concluded "research indicates that transition room children either do not perform as well or are at most equal in achievement levels to transition room-eligible children placed in regular classrooms."

A comprehensive review of the effects of retention was conducted by Holmes and Matthews (1984). They conducted a meta-analysis of 44 studies, calculating 575 effect sizes to determine the effects of retention on a variety of factors, such as achievement, personal adjustment, self-concept, and so on. The authors defined effect size as "the difference between the mean of the retained group and the mean of the promoted group, divided by the standard deviation of the promoted group." Meta-analysis has become a popular way to aggregate a large number of studies that investigate a common research question.

All the studies selected by Holmes and Matthews compared a group of retained students with a group of promoted students. Thirty-three of the studies investigated achievement effects. Those studies yielded an overall effect size that indicated that retained students scored significantly lower than promoted students on achievement measures. While teachers believe that retention in the grades kindergarten through third grade is not harmful (Tomchin & Impara, 1992), when Holmes and Matthews analyzed the data by the grade levels in which the retention took place (grades 1–6), they found negative effects at all grade levels. This calls into question the commonly held belief that the earlier a student is retained the greater the likelihood that retention will produce positive effects.

While proponents of retention maintain that promoting children when they are not ready can have a harmful effect on personal adjustment, the bulk of the research does not support this contention. In addition to achievement effects, Holmes and Matthews (1984) also calculated effect sizes on personal adjustment measures taken from 21 studies. They found negative effects for social adjustment, emotional adjustment, and behavior, as well as self-concept, as did another study on the long-range effects of retention (Thomas et al., 1992). Many studies have found that students' attitudes toward retention are negative. Byrnes and Yamamoto (1984) found that children who are retained recognize the change as failure and feel ashamed. In their study children rated retention behind only blindness and a parent's death as most stressful experiences. Smith and Shepard (1989) reported that clinical interviews with retained students indicate these students saw their retention as "flunking" and as punishment. In this same study, parents of retained kindergartners reported that their children experienced teasing and adjustment problems because of their non-promotion. Johnson (1991) argued that children who have failed in school show characteristics of learned helplessness. The students in his study were likely to attribute failure to themselves and to deny responsibility for success.

Jimerson (2000) summarized studies on retention between 1990 and 1999, systematically reviewing 19 studies that met a standard set of criteria for inclusion (published in a professional journal, addressed the impact of early grade retention on achievement, socio-emotional development or other factors, and included an identifiable comparison group of promoted students). A meta-analysis was conducted with these studies examining academic achievement and socio-emotional development and looking for effect size differences; that is, a measure of the benefit or harm of the intervention between the retained and comparison group across studies. Results examining achievement differences were very similar to the results of Holmes' earlier meta-analysis. Of 173 analyses that explored academic achievement, 9 found that retained students outperformed the comparison group of promoted students, 70 found that the comparison group outperformed the retained students, and 94 yielded no statistical differences at all. Only three of the nine analyses favoring retained students considered outcomes beyond the repeated year.

Results examining socioemotional and behavioral outcomes were explored in 16 studies yielding 127 analyses. Of these, 108 yielded no significant differences between the retained and the matched comparison group. Thirteen significantly favored the comparison group, while 6 favored the group of students who were retained. Jimerson (2000) notes that while the overall effect size for emotional adjustment was much higher than Holmes' 1989 meta-analysis, the social and behavior adjustment was similar and that additional effect size calculations show the retained group with overall lower ratings of adjustment, lower ratings of self-concept, and lower school attendance. Overall, 12 of the 19 study authors drew negative conclusions about the efficacy of retention. Four study authors drew favorable conclusions. However, these authors agree that retained children were still not successful at school—seeing retention as a way of lessening incompetence, at least temporarily, not creating competence—and all argue for additional remedial strategies. In other words, no authors conclude that early retention alone can solve the problem of academic failure and most conclude that it will not benefit students and may actually harm them.

Secondary Level

At the secondary level (i.e., middle school, junior high school, and high school) students are most often retained for two reasons: a lack of sufficient credits to be promoted to the next grade level or to graduate from high school or a failure to pass mandated minimum competency exams. The sources of these failures lie in either the students failure to learn to read effectively in the primary grades; a student's inability to develop the organizational, metacognitive, and study skills necessary for success in the upper grades; or a devastating combination of the two.

Through the sixth grade, retention rates tend to decrease with each year. However, when students reach the seventh grade, retention rates rise and continue to increase in subsequent years (Medway & Rose, 1986; Rafoth & Carey, 1991). Generally, the increase in retention rates is due to students' inability to meet the school district's standards for promotion or to obtain sufficient credits to graduate from high school. Often these students have received failing grades, have demonstrated higher absenteeism than their promoted peers, have been retained in earlier grades, and have experienced higher rates of discipline incidents (e.g., suspensions) (Fleming & Zafirau, 1982). Alternative education is often not provided to these students, and for many life outside of school becomes more important.

Perhaps prompted by employers' doubts about the meaning of a high school diploma and society's current attitudes toward perceived deficiencies in the U.S. educational system, many states now require students to pass minimal competency exams to receive a high school diploma. However, many students are unable to pass these tests because of poor reading skills and/or academic performance, and retention becomes the "intervention" of choice. Once retained, remediation often does not occur during the student's retained year, and the student makes little, if any, gains in academic performance. Many school policymakers believe that retaining students unable to pass minimum competency tests will motivate those students to improve skills and complete the necessary requirements for graduation. However, students are often not motivated by retention and once they have experienced retention, they often equate the circumstance with failure, view themselves as failures, and thus drop out of school. It appears that setting higher standards and administering competency testing do not improve the academic performance of students most at risk for school failure. Instead, these actions may result in an increase in the number of students who are retained and drop out of school (Hamilton, 1986).

Research on retention at the secondary level has generally examined the relationships between grade retention and attendance, suspension, and self-concept, with an emphasis on the correlation between retention and dropout rates (Rumberger, 1995; Shephard & Smith, 1990; Wehlage & Rutter, 1986). Retention rates at the high school level are related to attendance and suspension rates (Fleming & Zafirau, 1982). Generally, students who are failing do not attend school on a regular basis. In addition, students who have been retained prior to the secondary level are less likely to attend school on a regular basis in junior and senior high school. Additionally, regardless of the grade in which retention occurs, secondary students who have been retained often exhibit low self-esteem. In a follow-up study of high school students with a history of grade retention, Hagborg, Masella, Palladino, and Shepardson (1991) found that retained students were lower on a number of variables, including achievement, intelligence, and grades, and were more often absent from school and scored lower on a measure of self-esteem than did non-retained peers. They did note that students retained later in their educational careers displayed even lower grades, less positive school attitudes, more discipline problems, lower self-control, and a more externalized locus of control. General conclusions drawn from many studies suggest that retention correlates negatively with students' self-concept, peer acceptance, and personal adjustment.

The majority of the research on retention at the secondary level has focused on the relationship between retention and dropping out of school. Shephard and Smith (1990) reported that students who drop out are five times more likely to have repeated a grade than students who eventually graduate. Studies that conclude that retention is associated with dropping out are numerous (Cairns, Cairns, & Neckerman, 1989; Ensminger & Slusarick, 1992; Fine, 1991; Roderick, 1995; Rumberger, 1995). Being retained twice virtually guarantees a student will drop out of school, and grade retention alone has been identified as the single most powerful predictor of dropping out. This relationship can be explained by two competing hypotheses: (a) Repeating a grade may increase the risk of dropping out or (b) poor achievement may account for both retention and dropping out.

In many early studies undertaken to analyze the relationship between retention and dropping out of school, the achievement variable was not controlled. However, in a number of more recent studies (e.g., Grissom & Shepard, 1989; Jimerson 1999) the achievement variable was adjusted in order to focus only on the relationship between retention and dropping out. It has been found that the dropout rate of overage students (retainees) is appreciably higher than the dropout rate of regularly promoted students when reading achievement scores are equivalent for the two groups. Even in high-socioeconomic school districts, where students are less likely to leave school, a significant increase in dropout rates has been found for retained students. Jimerson (1999) found that retained students had a greater probability of poorer educational and employment outcomes in late adolescence when compared with low-achieving but promoted students, including levels of academic adjustment by eleventh grade, dropping out by age 19, receiving a diploma by age 20, enrolling in a postsecondary education program, receiving low educational/employment status ratings, being paid less per hour, and receiving poor competence employment ratings at age 20.

Do Some Children Benefit From Retention?

Sandoval and Hughes (1981) found that the children who made academic and social gains after repeating first grade had not experienced serious academic deficits in the year prior to retention, had strong self-esteem and social skills, and had shown signs of difficulty in school because of lack of exposure to academic materials (e.g., because of high absenteeism, illness, or frequent family moves) rather than low ability. In a 5-year follow up, Sandoval (1987) found that these same factors predicted success in the upper grades. However, Smith and Shepard (1989) make two points about this study: The fact that relatively high achievement and high self-concept prior to retention correlated with positive outcomes implies that the most successful retainees are those who need it the least. Even the most successful retainees are no better than promoted controls on a variety of outcome measures at the end of first grade. Dawson (1998) reviewed the literature and concluded that the general consensus is that while there may be individual children who benefit from retention we cannot predict who they are. Students who benefit from retention are more likely to have had additional educational interventions such as after-school tutoring, and a specific remedial plan beyond simple retention. Because these additional interventions were not provided for matched groups, it is difficult to ascertain whether the retention or the interventions produced positive effects.

At times, retention is employed in an attempt to postpone or supplant special education. However, there is little evidence to support the use of retention in this way (Barnett, Clarizio, & Payette, 1996; Carstens, 1985; Chandler, 1984; Lieberman, 1980). Cross (1984) found that the most important factors governing a teacher's decision to recommend retention were failure to complete a primer designated by the school district, general immaturity, and anticipated resistance to retention from the child's parents. Cross found that there were no differences in the reading achievement test scores of the children recommended and those not recommended for retention, and none of these factors has been shown to be useful predictors of successful retention.

Some researchers have believed it possible to predict which students benefit from retention and have encouraged schools to develop decision-making procedures to aid in selecting likely candidates (Lieberman, 1980; Light, 1977). Others have rejected such a process. Smith and Shepard (1987) conclude from their own research and their review of the literature, "Although some small percentage of those retained may be helped, the evidence indicates that educators are simply unable to predict accurately which individuals these will be." In addition, students who are retained report being teased, and the majority (84%) of first graders in one study said they would feel "sad," "bad," or "upset" about being held back (Shepard & Smith, 1990).

BEST PRACTICES

Alternatives to Retention

School psychologists' involvement with retention practices can occur on several levels. It can range all the way from participating in making retention decisions about individual students to influencing school or district-wide retention policies to lobbying for change on a state level through the collective efforts of a state school psychology association. An important effort at each of these levels should be to promote systemic approaches to reduce academic failure and the use of alternatives to retention that will not put students even more at risk by making them old for grade.

Promoting Systemic Solutions

The only real solution to the retention/social promotion debacle is to eliminate most serious academic failure before it occurs. This can only happen when the problem is attacked from a system-wide approach with careful attention to developmental issues and the findings of research on the efficacy of various forms of intervention. The use of screening assessments in preschool and kindergarten to identify students who may be at-risk for academic failure, particularly in the area of phonemic awareness, has been shown to be a sound method of predicting which children will have difficulty learning to read (National Institute of Child Health and Human Development, 2000). Similarly, reading interventions that provide intensive, early, and individualized help that targets a child's specific weaknesses (e.g., Success for All, Reading Recovery, Direct Instruction), (Slavin, Karweit, & Madden, 1989) have been shown to be effective in reducing early reading failure. The use of learning strategies instruction has been shown to be very effective in improving study skills and performance in middle school students. Inability to organize and study independently are often key factors in academic failure at this level (Forness, Kavale, Blum, & Lloyd, 1997). Inability to read effectively and to learn to study independently often leads to failure at the elementary and middle school levels and creates profound motivation problems at high school that contribute to the ultimate school failure; that is, dropping out. Systemic approaches to solving the problem of serious academic failure must target each of these areas from a developmental perspective that seeks to increase academic success at each major educational level (elementary, middle, and high school) by ensuring that more students are able to meet major academic task demands.

Individual Retention Decisions

School psychologists can be important participants when decisions are made about retaining students in their schools. They should help evaluate the reasons for school failure by looking at the children's school and developmental histories, the effectiveness of the instruction they have received, and the remediation strategies or programs available to them. The school psychologist should help plan an appropriate instructional program for the following year, whether or not the student is retained, and should act as a consultant both to parents and to school personnel to help them make retention decisions.

Two case discussions may help illustrate the part the school psychologist can play in making retention decisions. In the first case, a child whose first-grade teacher recommended retention was referred by her parents to the school psychologist for testing to rule out the possibility of a learning disability. The teacher reported that the student was having difficulty getting beyond the primer level in reading, her attention span seemed somewhat short, she had some trouble completing work independently, and she also seemed to be exhibiting some "immature behaviors," such as fidgeting in her seat and putting her fingers in her mouth. The child, an attractive, petite girl, was assessed as having average intelligence with achievement commensurate with her ability. The school psychologist met with the child's teacher and parents. She reviewed the test results and then led a discussion about retention. She summarized the research on retention, stressing that there is little evidence that it helps over the long term. She indicated that initially students who are retained in first grade show some improvement over similar students who are not retained but that these gains tend to disappear by third grade. She noted that the child's teacher was trying to make the best decision for the child as she could precisely because she was worried about the child's progress in the coming year, thereby lending support to the teacher without necessarily espousing her recommendation.

The school psychologist reported that while some children do seem to benefit from retention, at present educators lack the ability to predict reliably just which children will benefit. Therefore, she stressed to the child's parents that it would be important that they feel comfortable with whatever decision they made, since undoubtedly the child would sense her parents' comfort or discomfort with the decision. This statement was emphatically echoed by the child's teacher. The decision was left in the parents' hands. The mother later reported to the school psychologist that she had decided not to have her daughter retained. She indicated that as a child she had matured at a young age and she was worried that the same would happen to her daughter. She was concerned about the effect of early maturation, particularly if her daughter were already a year older than most of her classmates. While this parent decided to have her child continue on to second grade, she wanted to be sure her child would be able to get supplemental reading services and that her teachers would continue to monitor her progress in reading.

In a second example, a school psychologist became involved in the case of a kindergartner being considered for retention. In this case, the school psychologist led a team discussion, first questioning why retention was being considered. The classroom teacher pointed out that the child had spent most of the year in kindergarten with an undetected hearing loss, and, hence, it was unclear how much the student had been able to benefit from instruction. The school psychologist then referred to the section of the NASP Position Statement on Student Retention and Social Promotion (see Position Statement at the end of this volume), which specifies when retention is less likely to be harmful. She went down the list: Does this student lack serious academic skills deficits? Does the student have positive self-esteem and good social skills? Has the student had difficulty in school because of lack of access to instruction? The group decided that the answer to these questions was yes, and, hence, this youngster might benefit from retention.

Most parents and educators are unaware of the research on retention. The school psychologist should be willing to share this research to help schools and parents make informed decisions. This information should not be imparted dogmatically or in a way that impairs working relationships with colleagues or parents. In some cases, this may mean recognizing that schools will make decisions to retain children when the school psychologist feels it is not in the best interest of those children. Especially in these cases, it will be important for the psychologist to participate in developing a specific plan of action by which the student's skills deficits can be remediated. School psychologists are encouraged to gather follow-up data on children who have been retained and of children of comparable achievement levels who are not retained to help their school districts better understand the outcomes of retention decisions.

School District/System Level

School psychologists' participation at a school district or system level can take many forms. As within their own schools, they can publicize the research on retention to help guide the development of informed policies. They can also serve an evaluative role, using district-wide data to assess the outcomes of retention decisions. And they can monitor the progress of students to ensure that problems are identified and addressed early, before retention becomes a consideration. School psychologists can also promote the development of effective alternatives to retention at all grade levels, from preschool through high school. These can include both developing programmatic interventions that address the needs of failing students and expanding the capabilities of classroom teachers to meet the needs of students at different skill levels.

Programmatic interventions may include developing screening programs to identify children at risk for school failure and to ensure early access to programs already available in the school or community, such as Head Start, Chapter I services, and remedial programs. It may also include developing intervention programs such as after-school tutoring or summer school courses. However, such programs may not be sufficient to make up serious deficits in short amounts of time and cannot take the place of preventative, systemic approaches. At the secondary level, school psychologists should encourage the development of re-entry programs for dropouts and alternative education programs, such as ones that combine teaching skills with job training. Successful programs at the high school level often have two characteristics: (a) one or more individuals who develop relationships with students individually and monitor their progress carefully and (b) some mechanism to allow students who have failed courses and lost credits to regain these credits in quicker than normal time, allowing for graduation at the expected time. Simply put, successful programs must address the motivational issues that have developed by adolescence and the lack of academic achievement identity typically present in students who drop out of school.

Because unsuccessful middle and high school students often lack basic strategic learning skills, intervention programs should also target these areas. One program, titled, "Share the Secret," trained peer tutors to be study skill coaches as well as help their target students with classroom work and content. Tutors (successful students themselves) were told "to share the secret" of learning and studying that enabled them to succeed academically. Students who received tutoring were high-risk students who received tutoring several times a week during assigned study halls. Overall, the study skills component positively impacted student achievement and attitude (Rafoth, 1998).

The instructional technology that enables classroom teachers to meet the needs of students of different skills levels is already available, but in many cases teachers do not have access to that technology. School psychologists can assist their school districts in learning about this technology and arranging for in-service programs to bring this information into the classroom. Instructional approaches such as mastery learning, adaptive education, team teaching, cooperative learning, peer tutoring, and curriculum-based assessment are all methods that have been shown to produce academic gains in students of all achievement levels.

Two examples of such approaches are one school district's decision to respond to high numbers of retentions in the early grades by implementing a curriculum-based assessment and remediation program to correct basic reading problems. The district, with state support, secured an outside consultant, conducted intensive in-services for teachers, and allowed a local school psychologist to develop expertise in the area and become an on-site leader. Enlisting community support to volunteer to review sandwich word drills with students garnered both help and excitement in the community. Children made substantial progress, teachers were excited by a new intervention method, and requests for retention dropped dramatically.

Similarly, another district has begun a system-wide program to provide inservice instruction to teachers in fostering metacognitive awareness and learning strategies in students, by helping teachers learn about metacognitive development and study skills training and learn how to embed instruction in these areas into their everyday teaching. Collaborative monthly meetings with a consultant and the training of Chapter I teachers to become on-site experts proved essential to this program's success. The program having been established at the primary level, the teachers in this district now speak less of retention and more of enabling strategies that can be carried over from grade to grade with at-risk students.

To be taught and implemented effectively, the program must gain from school districts a commitment to providing sufficient in-service training. School psychologists are often effective lobbyists for such continuing professional development. In making arguments for such training, school psychologists should help school administrators recognize the economic benefits of reducing retention rates. Given the annual cost of retaining a child (an average of $6,000 per year per student), if a school district, for instance, retains 30 students annually, adding 1 year to those students' school careers will cost districts or state educational agencies about $180,000 each year. There is no doubt that quality training for teachers and many specific interventions can be obtained at a far lesser cost.

Another district reduced retentions dramatically by putting in place a collaborative, problem-solving team to deal with problems before the necessity of referral. Retentions dropped from a peak of over 40 in the 1983–1984 school year to just six in the 1990–1991 school year in three elementary schools with an enrollment of 1,500. In addition, after the new model was put into place (through efforts of the local school psychologist), referrals not leading to special education placements and out-of-district placements also declined from 30 to 5, and from over 100 to less than 50, respectively, in a 5-year period.

State Education Agencies

As advocates for children, school psychologists can often be most effective when they move beyond the realm of their own schools and school districts to work at a state level to bring about change. The discrepancy between what is known about retention and what is practiced is great enough to warrant action at a higher level. While a school psychologist acting alone cannot influence state policies and practices, change can occur through the efforts of a state school psychology association.

School psychology associations are encouraged to share the research on retention with their state education agencies and with other professional education associates (such as state principals' and superintendents' groups). They are also encouraged to use the lobbying resources available to them to influence legislation, including funding for alternative services delivery and legislation that affects policy, such as decreasing the rigidity of minimal competency requirements.

SUMMARY

Recent reviewers have concluded that there are no clear benefits to retaining students and that the practice can have deleterious effects on students' achievement, self-concept, attitudes, high-risk behavior, and can increase the likelihood of dropping out of school. Research conducted since the release of the original NASP Position Statement on Student Retention and its subsequent revision has continued to support these findings. Although it is possible that a small percentage of students retained may benefit, it is impossible to predict which students those will be. Delayed entry into kindergarten and use of transition rooms before first grade are no more effective than retention, and whatever initial benefits may be derived from retention after kindergarten or first grade appear to be washed out by the end of third or fourth grade. Meanwhile, there appear to be dangerous correlations with many high-risk behaviors for students who are old for grade. School psychologists should assist in making retention decisions about individual students and should promote effective alternatives to retention. Most important, school psychologists must press for systemic solutions that target early reading deficits, independent learning skills, and motivational problems from a developmental perspective. Working to change school practices in the area of retention will require sharing the research on retention with educators, conducting evaluations on the outcomes of retention decisions at the local level, and lobbying at the state level to promote changes in policy and to advocate for alternative service delivery systems that more effectively meet the needs of students experiencing school failure.

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Dawson, P. (1998). A primer on student grade retention: What the research says. *Communiqué, 26*(8) 28-30.
This article is brief and comprehensive. It succinctly summarizes recent research on retention and presents the supporting case for the NASP Position Statement on Retention and Social Promotion. Demographic information is included as well as the impact of retention on self-esteem. Delayed entry to school and transition room placements are discussed in addition to the long-term effects of retention.

Gredler, G. (1992). *School readiness: Assessment and educational issues.* Brandon, VT: CPPC Publishing.
This book is divided into four sections that include (a) an introduction and review of the concept of school readiness (b) an assessment of readiness through screening measures and their validity and usefulness and the emotional and social adjustment of "young"-for-age children, (c) current practices in the schools such as variation in entry age and its effect on achievement; the use of transition rooms between kindergarten and first grade, retention, intervention/remediation programs for young children, and issues in early childhood education, and (d) related legal and ethical issues concerning readiness and early retention. It offers a comprehensive overview of all issues that touch on the practice of retention at the beginning of a child's education. He concludes that transition rooms and early retention are not effective and discusses alternatives.

Holmes, C. T., & Matthews, K. M. (1984). The effects of non-promotion on elementary and junior high school pupils: A meta-analysis. *Review of Educational Research, 45*, 225–236.
This study employed meta-analysis to integrate the findings of 44 studies investigating the effects of retention on elementary/junior high students. The results established consistently negative effects of retention on achievement, personal adjustment, and attitude toward school. The authors conclude, "Those who continue to retain pupils at grade level do so despite cumulative research evidence showing that the potential for negative effects consistently outweighs positive outcomes."

Jimerson, S. R. (2000). Grade retention review 2000: New directions for research and practice in the 21st century. Paper presented at the National Association of School Psychologists Conference, New Orleans.
This paper presents a comprehensive review of the research examining the academic and socioemotional outcomes of early retention. Studies published between 1990 and 1999 are summarized . A meta-analysis of 19 of those is presented. The results of this review are con-

sistent with previous findings that do not support retention as an effective intervention.

Smith, M. L., & Shepard, L. A. (Eds). (1989). *Flunking grades: Research and policies on retention.* New York: Falmer.

This volume provides a comprehensive review of the literature as well as a discussion of the editors' own research addressing policy and practice in student retention. Particularly noteworthy is their discussion of the relationship between retention and school dropout, in which they demonstrate that students of comparable achievement levels are more likely to drop out of school if they have been retained than if they have been promoted. The book concludes with recommendations for alternatives to retention.

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51 Best Practices in Planning Interventions for Students With Reading Problems

Laurice M. Joseph
The Ohio State University

OVERVIEW

The majority of students who are referred for academic concerns and/or have been identified as having a specific learning disability have difficulties in the area of reading. Among the population of students with learning disabilities, an estimated 80%have reading disabilities (Lerner, 1993). Students with poor reading skills are becoming more apparent to educators and parents due to the results found on criterion-referenced, high stakes mandatory testing that most schools nationwide have incorporated across grade levels. The National Assessment of Educational Progress (NAEP; 1997) reported that 40% of fourth graders, 30% of eighth graders, and 25% of twelfth graders were reading below grade level. The percentages are even higher and the gaps even wider between grade levels in schools predominately made up of free or reduced lunch eligible student populations (Snow, Burns, & Griffin, 1998). Therefore, it is imperative that school psychologists work with a team of professionals to help students with reading problems by designing interventions from data-based decision-making activities. While data based decision-making practices will be touched upon briefly to establish their important link to targeting interventions, another chapter in this volume more fully addresses diagnostic and assessment issues in the identification of students with reading problems.

This chapter addresses intervention needs of students who have been formally diagnosed with reading disabilities. It also addresses students who may not meet formal criteria for a learning disability in the area of reading but who struggle with identifying and comprehending written language. Moreover, this chapter is congruent with the consultation/problem-solving orientation toward the practice of school psychology and discusses data-based intervention planning without placing emphasis on formal classification. Problems in reading can affect performance across several academic content areas, occupational endeavors, and other functional skills that are used in everyday life activities. The task of the school psychologist is to work with teachers and parents to define those problems through data-based decision-making methods, to target interventions to address the problems, and to help implement and evaluate those interventions. Specifically, this chapter will describe briefly the characteristics associated with reading problems, delineate a problem-solving/data-based decision-making process to develop effective interventions, and finally focus on a variety of interventions that can be used to address different types of reading problems.

BASIC CONSIDERATIONS

Characteristics of Students With Reading Problems

Two types of students with reading problems that school psychologists and educators are likely to encounter are students with IQ-reading achievement discrepancies and students with a combination of low ability and low reading achievement. Students who have IQ-reading achievement discrepancies tend to have average to high average IQ and listening comprehension scores (Aaron & Joshi, 1992). Children with developmental dyslexia are included in this group of poor readers. Dyslexia is often associated with some neurological impairment that results in poor word recognition skills including phonological processing. Slow rate of reading, erratic oral reading, misuse of function words and suffixes, and reading comprehension difficulties on timed reading tasks are among the symptoms commonly associated with dyslexia (Aaron & Joshi, 1992).

Low ability readers make up the largest number of poor readers. They tend to have lower than average IQ and have below grade level listening comprehension, word recognition, and reading comprehension performance. Although we tend to classify children with severe reading problems as low ability readers or IQ-achievement discrepant readers, current research indicates that there are no significant differences between these two groups of readers on how they develop reading precursor skills (Wristers, Francis, Foorman, Fletcher, & Swank, 2000). Earlier research conducted by Stanovich and Siegal (1994) also suggested that IQ did not predict reading difficulties among low ability (garden variety readers) and IQ-discrepant readers. Instead, they found that phonological core variables were better predictors of reading skills. Therefore, differential diagnoses based on IQ scores do not yield different growth patterns in reading development. For this reason, the remainder of this section will describe poor readers according to specific cognitive processes and behaviors they exhibit rather than according to diagnostic categories.

Poor readers with word recognition difficulties generally over rely on textual cues such as pictures and other words to identify words in a passage that are unknown to them (Kim & Goetz, 1994). Overusing textual cues to identify unknown words reduces the likelihood of transforming unknown words into sight words (Pressley, 1998). Many errors are made when children use semantic contextual approaches rather than sounding out words. Children need opportunities to sound out words even if this means they have to struggle (Adams & Henry, 1997). This may be easier said than done as many children do not know how to begin to sound out words. Some poor readers have limited letter-level knowledge or an understanding of the alphabetic principle. Typically, these types of readers are limited to being able to sound out only the beginning letter of a word.

The inability to sound out words can be attributed to phonological processing difficulties. Weak phonological processing accounts for the largest population of students classified as having dyslexia or individuals with severe word recognition difficulties (Pressley, 1998). Phonological awareness is a crucial component to becoming literate. This has been verified through studies that examined long-term effects of phonological awareness training in preschool and kindergarten on subsequent reading achievement performance of first, second, and third graders (Ball & Blachman, 1991; Byrne & Fielding-Barnsley, 1993). Phonemic awareness is knowing that spoken language is made up of discrete, operable sounds. Rhyme production, sound blending, sound deletion, sound substitution, and sound segmenting are among the many ways individuals can operate on spoken words. Developmentally, children begin with rhyme activities and then progress to segmenting sounds in words. Among phonemic awareness exercises, phonemic segmentation is the best predictor of word identification for primary grade children (Nation & Hulme, 1997). An example of a phonemic segmentation exercise would be to pronounce a word such as "cat" and ask a child to say each sound as three separable sounds in the word such as /c/ /a/ /t/.

Some children develop phonemic awareness through literacy experiences at home before entering school while others have limited exposure to print and role models who engage in reading and writing. Some children, regardless of their environmental conditions, struggle with grasping phonemic awareness. Thus, children who lack phonological skills and have a limited vocabulary will have difficulty phonologically "recoding" letters back into their constituent sounds when they encounter print (McCormick, 1999). When most children initially encounter a printed word, they go through a process of sequentially decoding the word by attempting to make letter-sound conversions. Phonological recoding occurs as children check to see if the word they made matches a word that has been stored in their memories (Daneman, 1991). At advanced stages of this process, children learn to decode words hierarchically. Hierarchical decoding involves using letters in words to cue the sounds of other letters. For example, using the "e" at the end of the word "came" to say the "a" as a long vowel sound.

Related to phonological recoding is orthographic processing. Orthographic processing refers to recognizing and remembering letters which includes noting sequences of letters in words and being able to distinguish among spelling patterns of words. Although smaller in population compared to those with phonological deficits, some children with reading and spelling problems have difficulty processing words orthographically (Stanovich & West, 1989).

Children need to become automatic at recognizing words to free up their cognitive energies to gain meaning from text. Poor readers not only struggle with recognizing words in text but also have difficulty suppressing irrelevant information in text which places limitations on the use of their short term capacity for comprehending printed material (Pressley, 1998). These students have particular difficulty grasping an understanding of texts that contain words with multiple meanings (McCormick, 1999).

Beyond the word reading level, poor readers have difficulty making inferences about the content presented in text. Poor readers do not connect ideas well and may not grasp the conceptual nature of the material. Problems with making inferences are partly due to poor readers' lack of prior knowledge about the content. On the other hand, good readers read more and gain more knowledge each time they read material.

Good readers also have a repertoire of comprehension strategies to help them construct meaning from text. Poor readers know very few, if any, strategies that aid in the construction of meaning from text and strategies for monitoring understanding of text (Pressley, 1998).

Collaborative Team Model

Regardless of their diagnostic label, poor readers get poorer without the benefit of effective instruction. This notion is what Stanovich (1986) coined the "Mathew Effects" in reading. In order to prevent the retention of weak literacy skills, appropriate stakeholders such as school psychologists, general education teachers, special education teachers, speech and language specialists, reading specialists, administrators, and parents need to initially establish collective efficacy about the relationship between instruction and performance. In fact, an increase in reading achievement occurred in schools where beliefs about teaching and learning competencies were shared collectively by stakeholders (Goddard, Hoy, & Woolfolk-Hoy, 2000). Once collective beliefs have been established, collaborative problem solving among interested stakeholders should occur within a data-based decision-making framework. In other words, the process of linking assessment to intervention needs to be shared by the appropriate multidisciplinary team members. Team members need to share the responsibility for determining students' skill levels, identifying instructional environment variables, targeting appropriate interventions, monitoring student progress as a function of interventions, and evaluating outcomes. These responsibilities are carried out though data-based intervention methods.

Data-Based Intervention Methods

Before describing interventions that help students with word identification and reading comprehension skills, it is imperative to discuss the bases for why some interventions are targeted for implementation over others. Decisions made without systematic data collection may result in targeting inappropriate interventions that further exacerbate students' struggles with reading.

When a student experiences difficulty with reading, professionals and other interested stakeholders (i.e., family members) should work in a collaborative fashion by collecting data to define the problem in observable terms. Data can be gathered through various methods according to the nature and severity of the reading problem. For instance, school psychologists may be responsible for conducting systematic observations of students engaged in oral reading and comprehension exercises. This is a good way to begin gathering data. Following observations, school psychologists may conduct interviews with students and teachers to uncover information that was not detected by observation. Teacher and student interviews can be helpful in gaining information about perceived expectations of competence in literacy and to ascertain efficacious behaviors toward meeting learning goals. Examples of teacher and student interviews can be found in Shapiro's (1996) *Academic Skills Problems Workbook*. Systematic observations coupled with interviews may be sufficient depending on students' needs or may further guide team members in choosing other appropriate reading assessments that are sensitive to specific difficulties as well as provide baseline measures of performance. Types of reading assessments may include informal reading inventories, curriculum-based measures, miscue analysis inventories, criterion-referenced tests, and standardized diagnostic reading achievement tests.

Practitioners are cautioned about the use of test scores derived from these assessments because they may not be as helpful for targeting interventions in contrast to the strategies students use or fail to use while attempting items involving identifying and understanding print. This is especially the case for students who are older and can identify words accurately but not automatically (Snow, Burns, & Griffin, 1998) and who may take a long time deriving correct answers to comprehension questions about text.

Once interventions are targeted and implemented from assessment information, treatment integrity needs to be assessed. This means that interventions need to be applied consistently as designed. For a comprehensive discussion about this important aspect of implementing interventions, please see Telzrow's chapter on intervention integrity in this volume. Progress monitoring of student performance over time is another critical component that needs to occur to assess whether or not interventions are effective for meeting students' literacy needs. Curriculum-based measures and other informal measures (e.g., teacher-made probes and informal reading inventories) that indicate specified criterion levels of performance can serve as appropriate assessments for progress monitoring of student performance. School psychologists may support teachers by helping them monitor student progress over time in a systematic fashion. Students should also be encouraged to engage in progress monitoring activities. Graphic representations of data may provide a visual description of whether interventions have been appropriately targeted and applied. The following case study illustrates the use of various assessments that aided in targeting an intervention and conducting systematic progress monitoring.

Case Study of Rick

Rick was a third-grade youngster with an attention-deficit hyperactivity disorder and learning disability in reading and written expression. His special education teacher consulted with the school psychologist about intervention suggestions for Rick. The school psychologist conducted systematic observations of Rick during oral reading and spelling activities. Observations revealed difficulty with making letter-sound correspondences while attempting to identify basic high frequency words with consonant-vowel-consonant patterns. A teacher and a student interview was conducted, and it was determined that Rick was provided with a buddy to read stories and to assist with classroom assignments. Rick reported that he would feel anxious about completing reading assignments if he did not have his buddy's assistance. Without assistance, Rick was asked to read and spell a list of 100 words with consonant-vowel-consonant patterns. It was determined from this assessment that Rick could only read 5 out of the 100 words on the list. Interestingly, he was able to spell 90% of the words on the list.

The school psychologist assisted the special education teacher in developing procedures including integrity checks during baseline, intervention, and maintenance sessions . Baseline word identification and spelling probes were developed and consisted of 10 words that were randomly selected from a list of 100 words. The 10-item probe was given over three sessions. It was determined that Rick's mean identification score was 5.0, and his mean spelling score was 8.6. Word boxes, an intervention described in detail in the intervention section of this chapter, was implemented to help Rick make letter-sound correspondences while attempting to identify words. Word identification and spelling probes were administered daily at the completion of intervention. They contained sets of words with consonant-vowel-consonant patterns taken from the list of 100 words. Rick obtained a mean score of 8.6 on word identification probes and 9.8 on spelling probes across instructional sessions. Maintenance probes were also administered, and Rick maintained a high level of performance on probes. Figure 1 depicts a graphic representation of Rick's word identification and spelling performance overtime.

BEST PRACTICES

This section provides a description of evidenced-based instructional interventions for students who have difficulty with word identification and reading comprehension. Since many educational professionals are likely to be aware of some of the traditional

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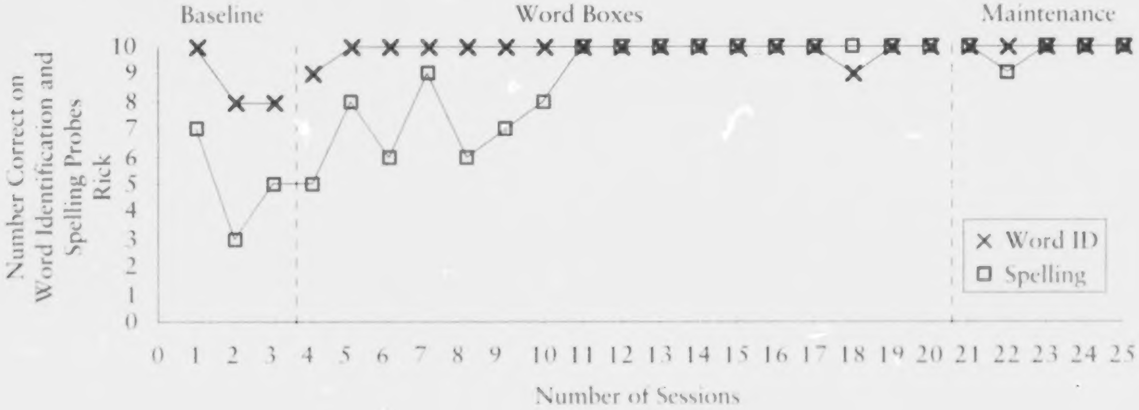
Figure 1. Continuous progress monitoring of Rick's word identification and spelling performance



approaches to literacy instruction that have been used over many years, many of the approaches presented in this section will be those that are considered contemporary approaches for meeting the needs of diverse learners. Of course, the interventions described are not exhaustive of all approaches for the amelioration of reading difficulties. Please consult the resources listed in the annotated bibliography section of this chapter for further reading about any of the interventions presented in this chapter and for a description of other instructional approaches. For anyone thinking about implementing any of these interventions, it should be realized that "one size does not fit all." It may be desirable to modify or target other interventions based on sufficient data obtained about the unique needs of individual students.

General Components of Effective Instruction

Whether word identification or comprehension interventions are implemented, general psychological components of teaching and learning that apply to how children acquire literacy should be incorporated in lessons. Scaffolding, shaping, connecting to prior knowledge, constructing meaning, motivating students, and providing opportunities to learn have been considered among the key components of best literacy instructional practices (Gambrell, Morrow, Neuman, & Pressley, 1999). School psychologists can work collaboratively with educators by helping them incorporate the following critical components during instruction.

SCAFFOLDING

Several instructional approaches to word identification and reading comprehension employ scaffolding. Scaffolding, a term coined by Wood, Bruner, and Ross (1976), means that necessary support needs to be given to a child and gradually faded once the child approximates independent functioning while completing tasks. The concept of scaffolding is rooted in Vygotsky's (1978) notions about how the mind develops through interactions between teachers and students and how children may be able to achieve more than what was initially expected given the proper cultural tools. Examples of scaffolding include teacher facilitation and feedback as well as appropriate instructional materials that serve as supportive structures to make tasks solvable (Carnine, Silbert, & Kame'enui, 1990). Instructors who embrace scaffolding procedures often are those who view themselves and the materials they design or select as mediators of learners' development.

SHAPING

A behavioral concept that is similar to scaffolding is shaping. Shaping, a term described by Skinner (1957), means to elicit reinforcers for successive approximations toward completing an objective. Delivering reinforcers for efforts made toward achieving a goal can be considered as ways of providing support to students. This cannot be stressed enough when working with children with reading difficulties. Many children with severe reading problems will become extremely frustrated in the process of becoming literate because they will not experience success immediately. Reinforcers may not have been a systematic part of students' instructional histories. In other words, contingencies for reading behavior may have been inconsistent or delivered haphazardly rather than in successive approximations to desired reading behavior. These are the children who grow up and find reading not enjoyable and may not experience reading as a reinforcer (e.g., gaining information and pleasure). These individuals may later find themselves in limited employment and social situations. Therefore, it is crucial that educators and parents shape reading behaviors through praise and rewards contingent upon efforts made at achieving reading skills.

CONNECTING TO PRIOR KNOWLEDGE

Effective instruction includes being aware of what students know. Assessing student's prior understandings and experiences will help teachers facilitate links between what students know and what they need to learn. How quickly one grasps information presented in text depends largely on one's prior knowledge of the content (Gambrell et. al., 1999). Students with learning problems often have limited prior knowledge and experiences on which to "hook" new information. It is especially imperative that teachers provide opportunities for students to gain background knowledge through discussions and activities before students are presented with text that is foreign to them.

CONSTRUCTING MEANING

While specific literacy skills are important to teach, educators must keep in mind that the purpose of reading is to construct meaning from text. Capturing the plot of a story, following instructions for putting things together, and learning about current events are among some of the purposes for reading. Several scholars claim that children acquire decoding, spelling, grammar, and comprehension skills more easily if the context from which they are presented is personally meaningful (Gambrell et al., 1999). Higher-order reasoning and new meanings about text can result from children who were provided with meaning-based literacy activities at school and home.

MOTIVATING STUDENTS

Motivating students to read is a real challenge particularly for the upper elementary and secondary school teachers. Studies have shown that kindergartners and first graders are more likely to expend efforts toward reading even if they fail (Nicholls, 1990) while older students, especially those with learning difficulties, are less willing to put forth effort if they do not experience success (Jacobson, Lowery, & Ducette, 1986). Young children are more likely to attribute their failures to insufficient effort while older students who struggle with reading often attribute their failures to factors such as task difficulty and unfounded teacher perceptions (e.g., student feels teacher does not like him or thinks he is incapable).

Attribution retraining (i.e., helping students realize their efforts lead to desired outcomes) coupled with strategy instruction has been found to be effective for helping low achieving students improve on their use of reading strategies (Carr & Borkowski, 1989). Literacy activities should be authentic, integrated with other content areas, interesting, and occur within a social context so that students are motivated to participate in them (Pressely, 1998). This includes providing students with opportunities to choose from a range of high quality literature and to exchange dialogue about reading material (Palmer, Codling, & Gambrell, 1994).

PROVIDING OPPORTUNITIES TO LEARN

Within the time allotted for literacy activities, students need opportunities to make frequent responses during oral and silent reading as well as writing lessons. Students also need plenty of opportunities to practice new skills that are learned. This instructional component cannot be emphasized enough while students are acquiring literacy skills. Children with learning disabilities and mental retardation need more opportunities to practice than their peers (McCormick, 1999). Over-learning leads to transferring skills to other tasks more easily.

Word Level Interventions

Many students who experience difficulty identifying words are not aware that spoken words are made up of discrete sound units (Adams, 1990). Phonemic awareness exercises also help children operate on sounds of spoken language through phonemic blending, segmentation, deletion, and substitution activities. Phonemic blending exercises involve blending individual sounds or clusters of sounds together to form a whole word such as blending the sounds /c-a-t/ to form the word /cat/ and blending /fl-at/ to form the word /flat/. Segmentation exercise involves saying each individual sound in a word such as saying /t-a-p/ for the word /tap/. An example of a phonemic deletion would be removing the /f/ from the word /fin/ and saying the remaining sounds /in/, and substitution consists of adding a different sound (/b/) to the remaining sounds to make a new word (/bin/). Phonemic analysis exercises can involve identifying the position of sounds in words such as identifying the /a/ as the middle sound in the word /tap/.

The purpose of implementing interventions that target word level problems is to help children eventually read words by sight or with automaticity. Some children have difficulty reading words automatically because they do not possess strategies in making letter-sound associations. Word level interventions consist of phonics instructional approaches. Phonics incorporates methods by which children learn letter-sound associations. Stahl, Duffy-Hester, and Stahl (1998) stated that good phonics instruction consists of developing the alphabetic principle, developing phonemic awareness, providing familiarity with forming letters, and providing sufficient practice in reading words. They also indicated that good phonics instruction should not be rule-based and does not dominate literacy instruction programs. Many of the rule-based approaches used workbook exercises that required children to memorize and recall rules. Clymer's (1996) review of commonly used words in children's reading materials revealed that rules were rarely applicable to most words encountered in texts.

PHONIC APPROACHES

There are a variety of approaches to teaching phonics. Rule-based approaches are considered to be analytic approaches to teaching phonics (Cunningham, 1999). Children are taught some words and asked to analyze them by breaking the words down into their component parts followed by making phonic generalizations about the words. As alluded to previously, many basal reading programs that include accompanied workbooks are reflective of an analytic approach to teaching phonics (Stahl, Duffy-Hester, & Stahl, 1998). For example, students may read a list of words on a worksheet and mark whether the vowel in each word makes a "long" or a "short" sound. Synthetic approaches to teaching phonics, on the other hand, involve explicit teaching of letter-sound associations. During practice lessons, students pronounce sounds in isolation and then blend them to make words (McCormick, 1999). An example of an empirically supported synthetic phonics program is Direct Instruction (Adams & Englemann, 1996). This approach infuses behavior analysis principles of teaching children to systematically progress from one phonic skill to the next. Initially, individual sounds are taught and then children are asked to blend sounds to form words. Cueing, feedback, and opportunities to make many responses are provided during every lesson.

Drawing from decades of her own research, Cunningham (1995) advocated teaching phonics through primarily an anologic approach. In an anologic approach, children are taught to become word pattern detectors and use words or parts of words they know to figure out unknown words. For instance, if a child can read and spell the word "sit" then the student will also be able to read and spell the words "fit," "kit," "bit," "hit" and other words that belong to this family of words. Cunningham's Four Blocks program follows predominately an anologic approach to teaching phonics (Cunningham, 1999). The Four Blocks program is a combination of four major reading approaches that emphasize multilevel instruction. This program includes guided reading, self-selected reading, writing, and word study approaches. The word study approaches best illustrate the kinds of activities that would represent teaching phonics anologically. Doing the word wall, making words, and guessing the covered word are among some of the activities included in the word study portion of the program.

Doing the word wall consists of putting words up around the classroom where children can easily see them. Displayed words should be carefully selected and correspond to those that children commonly need in their writing. Only approximately five new words need to be added to the wall per week. Words that typically cause confusion can be written in a variety of colors so they stand out among those written in black. Children are asked to write and say the words on the word wall and complete a variety of review activities so words are read and spelled automatically.

Making Words activity consists of providing students with six to eight different letters on letter cards. The teacher says words with two, three, four, and more letters that can be formed with the letter cards. Children are then asked to use all of their letters to make a big word that is related to something they are reading. For instance, the teacher may give the students cards with a letter printed on each. The letters may be, s, a, p, l, r, e, t. The students are instructed to use the letters to form two-letter words and then three-letter words and so forth . At the completion of the lesson, the students are asked to use all of the letters and make a big word such as "stapler" (see Cunningham & Hall, 1994, for a thorough discussion of this activity).

Guessing the covered word consists of writing four to six sentences on the board and covering up one word in each sentence with a sticky note. The first sentence is read, and the students guess the covered word as the teacher writes down all the guesses. The teacher explains to the children that the covered word could be lots of different words when the letters are not shown. All of the letters are uncovered up to the first vowel. Guesses that do not begin with the beginning letters are erased, and the students are encouraged to continue guessing with the remaining words written on the board or make new guesses. Eventually, the whole word is uncovered as students' guesses approximate or match the covered word.

In the Four Blocks program, children are taught to rely on word study strategies to identify unknown words while reading texts (Cunningham, 1999). The words blocks activities can also be considered ways in which children study about words. In fact, these types and other similar approaches have been classified as word study phonic approaches and considered to be contemporary because they employ multisensory methods of helping children understand phonological and orthographic features of words (Stahl, Duffy-Hester, & Stahl, 1998). Other types of contemporary word study approaches include word sorts and word boxes.

Word sorts are an anologic phonic approach for helping children categorize words according to shared phonological, spelling, and meaning components. They can come in the form of closed sorts where the teacher establishes the categories or open sorts in which children induce the categories based on an examination of subsets of given words (Zutell, 1998). Words to be sorted are usually placed on index cards, and the established categories provide a structure for detecting common spelling patterns and discriminating among word elements (Barnes, 1989). Bear, Invernizzi, Templeton, and Johnston (1996) provide a comprehensive guide to creating various types of word sort lessons and other word study phonic activities. For instance, phonemic awareness sorts can be accomplished by having the children place tokens below given respective word categories as the teacher articulates words. Children can also spell words below respective categories as the teacher orally presents words. Howard Street (Morris, Shaw, & Perney, 1990) and Early Steps (Santa & Hoien, 1999), two effective tutoring programs for low achievers, incorporate word sort techniques rather extensively.

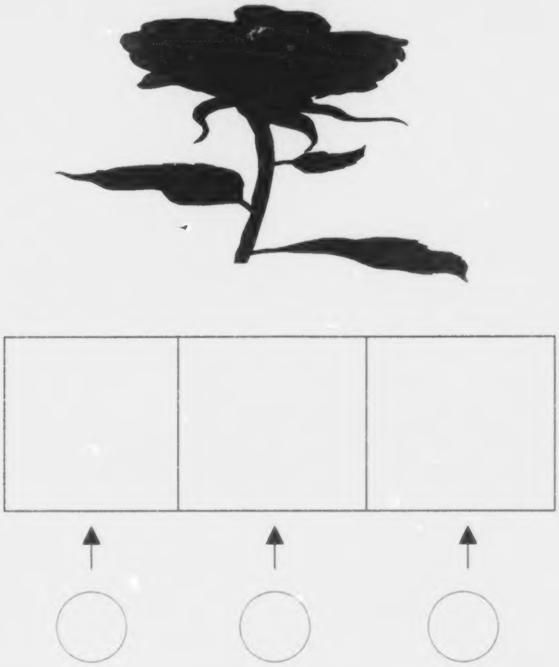
Word boxes, a synthetic phonic approach, helps children segment sounds of spoken language. This approach has been effective for helping children with learning disabilities identify and spell words (Joseph, 1998/1999). Typically, word boxes have been used within the comprehensive Reading Recovery program (Clay, 1993). A word box consists of a drawn rectangle that has been divided into sections (boxes) according to individual phonemes in a word. Initially, children place tokens in respective sections as each sound in a word is articulated slowly (see Figure 2). Eventually, children place letters (either magnetic or tile) in respective sections as each sound in a word is articulated. During advanced phases, children are asked to write letters in the respective divided sections of the box.

Joseph (2000) compared beginning first-grade children who were either assigned word boxes lessons, word sorts lessons, or traditional phonics lessons and found both word boxes and word sorts to be effective on children's phonemic segmentation, phonemic blending, word identification, nonsense word naming, and spelling in contrast to the traditional group's performance. There were no significant differences between the word boxes group and the word sort group. Controlled comparative research is still very young, and until more data are obtained, it is best practice to be flexible and choose from a variety of empirically based phonic approaches that facilitate the study of phonological and orthographic components of words.

SIGHT WORD RECOGNITION

A reciprocal relationship exists between developing sight word recognition and word identification skills

Figure 2. Phonemic segmentation phase of word boxes instruction. The word, "rose," has three sounds and, therefore, three connected boxes along with the same number of tokens are presented.



for reading new words. Once students are able to read a bank of words fluently, they can easily identify new words by analogy especially if letter sequences contained in words are similar. And, once children break sound to letter codes, they are able to read words more easily by sight or automatically especially if children engage in repeated readings of words (Samuels, 1988). Repeated exposures to words in multiple contexts are also important for storing words in memory and recalling them easily (Pressley, 1998).

Higher-Order Interventions

Higher order interventions include reading comprehension and concept attainment activities. Learning strategies instruction approaches were found to be effective for helping children with learning problems attain concepts and improve on their reading comprehension performance (Pressley & Woloshyn, 1995). Learning strategies instruction approaches that consist of self-questioning, constructing mental representations to integrate information from text, and identifying text consistencies were among the most effective comprehension strategies (Haller, Child, & Walberg, 1988). Examples of these approaches include semantic mapping, PQ4R (Preview, Question, Read, Reflect, Recite, and Review), and reciprocal teaching.

Semantic mapping typically involves developing word webs that reflect students' understanding of concepts and constructing a diagram connecting events of a story or connecting facts taken from content area textbooks (Novak & Musonda, 1991). Students who struggle with grasping conceptual relationships may find diagrams to be helpful visual aids. Semantic maps can be either process-oriented or product-oriented (McCormick, 1999). Process-oriented maps usually are completed before students read assigned material to help them establish some background knowledge. This type of mapping requires teacher facilitation of student responses. For example, a teacher may write a concept (e.g., satire) in a drawn box and ask the class to give examples of when they experience it. As the class responds, the teacher writes their comments below the concept.

The teacher may then ask the class how it feels when they witness the concept and write their responses, drawing connecting lines to the other comments, and so forth. Product-oriented maps, on the other hand, are produced by students as an outcome activity after they have read material. Students generally work independently or with other peers and construct a map connecting ideas presented in text. An illustration of a semantic map summarizing some aspects of North Carolina's beaches can be seen in Figure 3.

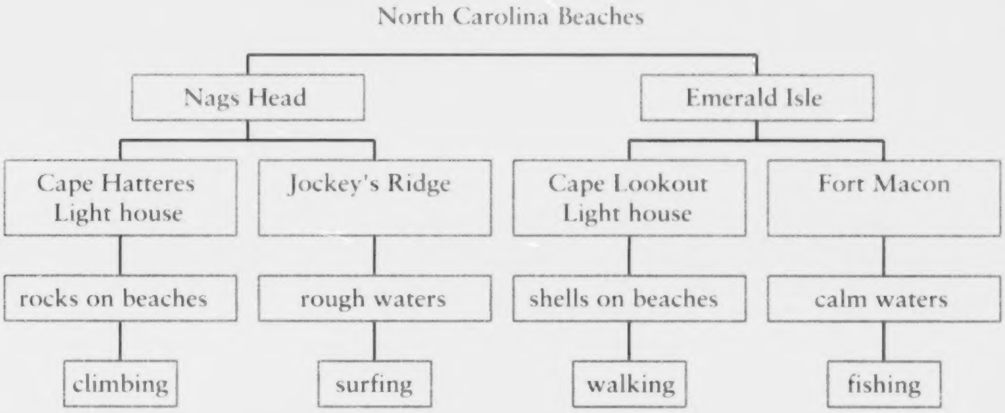
The PQ4R method of comprehending reading material is an extension of SQ3R (Survey, Question, Read, Recite, and Review) (Thomas & Robinson, 1972). This method involves previewing the reading material, questioning the reading, reading to answer the questions, reflecting upon the reading, reciting the reading, and reviewing the material. Previewing the material means surveying the chapter titles, main topics, and subheadings of the text. Students can turn the headings and subheadings into questions. Questions that were developed can be answered by reading the text. Reflections about the content can occur as the material is being read if the students pause to form connections and create images. Reciting is retelling what was read from memory. This form of retelling helps students monitor the information they are obtaining from the reading. If some information is not being retained, then students may need to read sections of the text again. Last, review the material by answering questions and referring back to the text for clarification of mistaken responses to questions. This method appears to be most appropriate for older students because it encompasses the application of higher-level metacognitive processes. Although PQ4R is not a new method, it continues to be considered as an effective technique for helping students organize and retain information from texts (Anderson, 1995).

Reciprocal teaching is a reading comprehension approach that has helped delayed readers catch up and even exceed typically developing readers (Palinscar & Brown, 1984). This approach places heavy emphasis on teacher-student interactions in a rather cognitive apprenticeship fashion. After students and teacher read from common text, they confer with each other about the reading material. Initially, the teacher leads the discussion by modeling strategies of predicting, question generating, summarizing, and clarifying text. The students are then asked to lead the discussions and apply the strategies that were demonstrated by the teacher. Guided practice is provided until students can use the strategies effectively. The goal of these reciprocal teaching interactions is to construct meaning from texts.

SUMMARY

The most frequent type of referral concerning students with academic problems is in the area of reading. Students with reading problems present characteristics that lend themselves to various instructional challenges. Some challenges of intervention design for the amelioration of reading problems lie at the word level, others lie at higher order

Figure 3. Semantic map of North Carolina's beaches



reading skills, and some lie with both. The best way to target appropriate interventions for children with reading problems is to conduct assessments that lead to appropriate data-based decision-making and problem-solving activities. Assessments that provide information directly linked to intervention design should be used with children who have been referred for having reading difficulties.

School psychologists play a vital role in meeting the needs of students with reading problems. By working collaboratively with teachers, parents, and other interested stakeholders to develop effective instructional interventions, school psychologists can be seen as part of the solution rather than the problem. In order for reading interventions to be effective, fundamental components of teaching and learning such as scaffolding, shaping, connecting to prior knowledge, motivating, and providing opportunities to practice skills should be implemented. Whether students are learning word level skills or higher order skills, mediations such as teacher facilitation and feedback are crucial to helping struggling readers become fluent. Teacher mediation and other cognitive tools can be seen through, for example, word study phonics, semantic mapping, and reciprocal teaching approaches.

In the past, school psychologists have often played a strong role in the diagnosis of children with reading problems. As our nation progresses into the twenty-first century where accountability of instructional and learning outcomes are at the forefront of objectives in most school systems, school psychologists need to move toward a proactive role of designing instructional interventions from data-based decision-making practices.

It is now time for best practices in school psychology to become the rule rather than the exception.

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This is one of the first books especially tailored to school psychologists consulting with teachers about students with reading problems. Aaron and Joshi describe psychological processes that contribute to reading acquisition. This book provides a thorough discussion about different types of reading difficulties including a very informative discussion about dyslexia. Intervention strategies for working with children who have word recognition, spelling, vocabulary, and comprehension difficulties are presented. An additional feature of this book is the practical guidelines for selecting basal series, reading tests, and tips for parents of children with dyslexia.

Bear, D. R., Invernizzi, M., Templeton, S., & Johnston, F. (1996). *Words their way: Word study for phonics, vocabulary, and spelling instruction*. Englewood Cliffs, NJ: Prentice-Hall.
This hands-on practical guide to designing word study lessons for helping children improve their phonological processing, vocabulary, and spelling is extremely user-friendly. More than 300 word study activities are presented in a mini-lesson format so professionals who directly work with students can readily reproduce and implement them in the classroom. Word study activities are included for all ages including preschool populations.

Gambrell, L. B., Morrow, L. M., Neuman, S. B., & Pressley, M. (1999). *Best practices in literacy instruction*. New York: Guilford.
This edited book contains chapters from many of the prominent scholars in the field of reading. An overarching theme of this book is the idea that literacy instruction should occur within an ecologically balanced curriculum. Instruction is described as a powerful tool and the teacher plays an important role as mediator in the development of children's literacy skills. Comprehension, writing, phonics, and the use of technology in literacy programs are emphasized in the various chapters. Links between home and school environments pertaining to the literacy needs of students are addressed.

McCormick, S. (1999). *Instructing students who have literacy problems* (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall.
This is a very comprehensive book dealing with many aspects of students with reading difficulties. Types of reading programs are reviewed and etiology of reading problems is addressed. However, this book more comprehensively provides a wealth of information about various types of assessments (formal and informal) for the identification of reading problems including identifying students' strengths and weaknesses. The other large sec-

tion of the book deals with instructional interventions that can be readily applied by practitioners. Case studies are included throughout the book that illustrate the authenticity of the content. One of the best features of this book is the description of instructional approaches for students with extreme needs such as nonreaders.

Pressley, M. (1998). *Reading instruction that works: The case for balanced teaching.* New York: Guilford. This book provides a discussion about the whole language versus phonics debate and the need for comprehensive balanced literacy instruction. Pressley provides several chapters on the development of literacy that spans from infancy to the upper elementary grades. He also provides a chapter on the problems that children experience while learning to read. This includes some of the probable causes and symptoms of literacy failure. Pressley makes links between the process involved in becoming literate with attributional and motivational theories of learning. He concludes with some reflections about where the reading field has been and where it needs to be from an instructional perspective.

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Best Practices in Contingency Management: Application of Individual and Group Contingencies in Educational Settings

Christopher H. Skinner and Amy L. Skinner
The University of Tennessee
Heather E. Sterling-Turner
The University of Southern Mississippi

OVERVIEW

Behavior analytic theory and research have proved useful to school psychologists who are committed to using empirically validated procedures for the assessment, treatment, and prevention of student problems within an educational setting. For example, behavioral assessment techniques have been shown to be advantageous because they (a) provide valid and direct measures of students' academic and social behaviors, (b) are sensitive enough to detect gradual changes in behavior, (c) can be used frequently with little time between assessments, (d) allow for within-subject analysis of behavior changes across conditions, (e) can lead to hypotheses regarding effective interventions for individual students, and (f) allow one to test and compare the effects of various interventions (see Shapiro & Kratochwill, 2000). Furthermore, a well-developed theoretical foundation and a plethora of behavioral interventions designed to alter behavior have been established and successfully applied across educational settings, students, and target behaviors (see Watson and Gresham, 1998).

In addition to developing theory and procedures, behavioral psychologists have developed a variety of single-subject research designs that allow school psychologists to conduct applied research in educational settings with individual subjects while controlling for threats to internal validity. Because most systems of intervention service delivery result in individual students being referred for idiosyncratic behaviors, these research designs may allow practicing school psychologists to alter students' behavior and contribute to the scientific database related to empirically validated interventions.

School psychologists can deliver services to students directly, as needs arise (e.g., individual therapy). However, the field of school psychology has been most effective recently in delivering prevention and remediation service through problem-solving consultation processes. Consultation with professional educators (e.g., teachers, administrators) often requires less time from the school psychologists than direct interventions. Consultation may be more effective because educators (a) work with the child on a regular basis within a student's natural environment and (b) may have more opportunities to implement intervention procedures. The process of consultation may also allow for the transfer of knowledge, skills, and attitudes, allowing educators to prevent and remedy future problems independently (Kratochwill & Bergan, 1990). Thus, it is not surprising that several models of behavioral consultation have been developed and shown to be effective for remedying students' learning and behavior difficulties (see Kratochwill & Bergan, 1990; Sheridan & Kratochwill, 1992).

The application of behavioral psychology within educational settings should increase when empirically validated treatments and consultation approaches to prevention and remediation are emphasized. However, the field of psychology appears to be in a cycle where the focus is shifting, or has shifted, from overt behaviors and environmental causes of behaviors to a focus on internal or subjective behaviors (Gibson, 1994; Robins, Gosling, & Craik, 1999). Although the degree of this paradigm shift is likely overestimated (Friman, Allen, Kerwin, & Larzelere, 2000), a similar trend is apparent within education, where internal constructs (e.g., information processing deficits, emotional intelligence or emotional quotients, learning styles, personalities, diagnostic categories, and developmental stages) have been and continue to be used to guide the development of intervention. Thus, pre-service educators may receive little training in behavioral theory and practice (Watson, 1994). Perhaps more disconcerting than lack of training, though, is when pre-service education professionals receive poor training and/or misleading information designed to discourage the use of behavioral theory and principles (Cooke, 1984).

Although paradigm shifts, psycho-educational fads, and training issues may partially account for the underutilization of behavior management procedures in general education settings, practical concerns may also play a role (Hall, 1991; Pumroy & McIntire, 1991). School psychologists have long recognized that if consultation models of service delivery are going to be effective, interventions must be developed and implemented within the context and constraints associated with classroom and school environments. Researchers investigating treatment acceptability have found educators prefer interventions that are time-efficient, fair, increase appropriate behaviors, and employ non-aversive approaches (Elliott, Turco, & Gresham, 1987; Lentz, Allen, & Ehrhardt, 1996). Additionally, interventions should be (a) effective, (b) either alter natural environments to support altered behavior or implement steps to encourage generalization and maintenance as part of the intervention, and (c) have an empirical research base that documents educationally valid changes in behavior within school settings (Stoiber & Kratochwill, 2000).

Unfortunately, many educators may associate contingency management procedures with individual behavior management programs designed to decrease inappropriate behavior levels (i.e., punishment programs). Although these programs have clearly been effective, they can be inefficient, reactive, aversive to students and educators, and considered unfair by educators, parents, and students. However, in many instances, positive contingency management procedures (i.e., positive reinforcement programs) can be designed to prevent and remedy both behavioral and academic problems. In addition to programs designed to address individual students' behavior, group contingencies can be used to design positive reinforcement programs that may better fit typical educational environments where educators are responsible to groups of students (Pumroy & McIntire, 1991).

In the next section, individual and independent-, interdependent-, and dependent-group contingencies will be defined. Applied strengths and limitations of these procedures will be described. Additionally, procedures designed to mitigate negative side effects associated with these contingencies and enhance desired effects within educational environments will be delineated.

BASIC CONSIDERATIONS

Although there are many variations of behavioral psychology (Baum, 1994), B. F. Skinner's operant behaviorism may have had the most influence on the development of applied behavior change procedures. Under an operant model, altering contingencies can change a student's behavior. Contingencies describe if-then relationships between behaviors and environmental antecedents and consequences. For example, a contingency contract may specify the following: When assigned homework (antecedent), Johnny will arrive at class the next day on time with his homework completed at 80% accuracy for 8 of 10 days (behavior and criteria). If these criteria are met, then Johnny will be allowed to engage in free time activities (consequence).

Under an operant model of behavioral psychology, the contingent delivery or removal of a consequence is seen as controlling or causing future behaviors. Whether a contingency represents reinforcement or punishment depends upon its effect, not desired effect, on future behavior. Reinforcement contingencies increase the probability of a behavior reoccurring under similar conditions and punishment decreases the probability of behaviors reoccurring. These procedures have utility for the school setting because teachers and other educators can often control the consequent conditions within educational environments and, thus, can often manage students' behavior by managing these contingencies.

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BEST PRACTICES: INDIVIDUAL CONTINGENCIES

With individual contingencies, each component of the contingency can be adjusted to meet the target student's idiosyncratic needs, goals, and learning history. For example, a contingency could be established where Ralph is allowed to erase the blackboard (consequent) only when he maintains a neat workspace (behavior). This flexibility in adjusting contingencies for particular students serves as both a strength and weakness of individual contingencies.

Target Behaviors

One strength of individual contingencies is that educators can target uncommon and highly idiosyncratic behaviors that are not typically addressed with traditional classroom rules. The majority of elementary school teachers are likely to have established contingencies (e.g., classroom rules) designed to prevent the occurrence of some predictable incidental behaviors such as students getting attention without raising their hands and being called on, staying in seat, following directions, stealing, and fighting. However, it is not uncommon for a student to enter the classroom with specific behaviors not covered under the rules (e.g., self-injurious behavior). In these cases, rather than alter the class rules, a teacher may merely design and implement an individual contingency management program.

Criteria for Reinforcement or Punishment

A second advantage of using individual contingencies is that teachers have the ability to alter criteria based on each student's current level of functioning, learning rate, and goals. While two students may have identical target behaviors to earn reinforcement, the criteria for one student may be set at a different level than the criteria for another student. For example, Jack, who typically fails to complete any work, could receive reinforcement if he completes 50% of his assignments. John, who already completes 70% of his assignments, may need to complete 90% of his assignments in order to receive access to reinforcement. Additionally, the criteria to earn reinforcement can be altered on an individual basis, depending on each student's learning rate (i.e., shaping). For example, the criteria for reinforcement may be increased significantly each week for Jane, based on her rapid behavior change or learning rate. However, similar changes in criteria may occur more gradually with Dick, who is putting forth strong effort but learning at a lower rate.

Idiosyncratic Consequences.

Some consequences serve as natural reinforcers without any prior learning (i.e., unconditioned reinforcers). However, many reinforcers are conditioned, and thus the effect of the contingent delivery of these consequences may differ across students. For example, teacher reprimands delivered to Joe contingent upon his failure to complete his assignment may serve as punishment. Thus, in the future Joe may be more likely to complete his assignments in order to escape or avoid the reprimands. However, with Carl, reprimands may serve as reinforcers, thereby increasing the probability of Carl's failing to complete his assignments.

In addition to the consequences themselves, procedures may need to be strengthened for some behaviors by delivering reinforcers more immediately or at higher rates. For example, a particular reinforcer may be effective in altering behavior X for Joe, but not behavior Y. Specifically, high effort behaviors may require stronger reinforcement procedures in order to be effective (Skinner, 1998). Additionally, behaviors that have a current or long history of being reinforced on variable and thin schedules may be more difficult to alter. For example, strong reinforcement may be needed to alter the disruptive behavior of Curly, the class clown, who has often been reinforced and continues to be reinforced by his classmates for these behaviors.

Contextual Concerns Associated With Individual Contingencies in Educational Settings

Individual contingencies are often used in special education environments where individual education plans are encouraged and supported. However, within general education environments there are several limitations associated with individual contingencies.

One of the primary disadvantages is the time and resources required to develop and implement multiple individual contingency programs. Educators must identify target behaviors, criteria, and consequences for each student when developing individual contingency programs. After each component of the contingency is developed and implemented, educators should measure the target behavior regularly to determine if the procedure is being effective. Based on treatment monitoring data, educators can then adjust the contingency components (e.g., redefine target behaviors; alter criteria; and change reinforcement procedures including the reinforcer itself, the rate of reinforcement, and/or the immediacy of reinforcement) in order to maximize gains and program for generalization and maintenance of behaviors. When working with large groups of students, it is extremely difficult for educators to develop, consistently implement, evaluate, and alter distinct contingencies (e.g., distinct target behaviors, criteria, and consequences) across students and target behaviors.

A related problem associated with individual contingencies is the perception of "fairness." On the surface, perceptions of fairness may appear to be a rather insignificant characteristic of psycho-educational programs. However, students (i.e., "Jack is the teacher's pet.") and parents (i.e., "They are picking on my child.") may all respond negatively to programs that they consider unfair. These perceptions can hinder the development of professional relationships between educators and students and educators and parents (Henington & Skinner, 1998).

Educators also may be concerned over how the individual reinforcement programs affect the behavior of classmates. For example, suppose a class is going smoothly and most of the students are responding well to formal (e.g., classroom rules and grades) and informal (e.g., teacher managing her attention) contingency management programs. However, the teacher has two primary concerns: Jane is not turning in her homework, and John is not following directions. In these instances, the formal and informal procedures are not working. It may be that the consequences are not reinforcing and/or punishing to these students. Perhaps the rate, quality, and/or immediacy of consequences are insufficient to alter these behaviors. In this situation, individual reinforcement contingencies could be developed for John and Jane. However, in addition to concerns that students will complain about the teacher being unfair, there is also some concern that some of the other students may start exhibiting problems so they, too, can have the opportunity to earn extra reinforcement. No educators want to be responsible for causing well-behaved students to misbehave or for encouraging students for thinking that they must be squeaky wheels in order to get the grease.

Some Solutions to Concerns

In the above scenario there are several options. One option would be to develop individual punishment programs that target these specific behaviors of these two students (i.e., John's failure to follow directions and Jane's failure to complete homework). While classmates may demand the same opportunities to earn enhanced reinforcement as misbehaving students, they are less likely to demand opportunities to receive additional punishment. Thus, using additional punishment as opposed to strengthening reinforcement may solve the problems associated with perceived fairness. However, for some children, schools are aversive environments where their behaviors are rarely reinforced and often punished. In these situations, adding additional aversive stimuli to the educational environment can exacerbate problems. Additionally, many teachers may feel that they are already spending too much time reacting to and punishing inappropriate behavior, as opposed to encouraging, teaching, shaping, or rewarding desired behaviors. Finally, additional individual punishment programs may draw classmates' attention to students' inappropriate behavior and indirectly encourage them to ridicule, to be ostracized, or to socially reject students who are not performing well. Thus, it is not surprising that teachers may be reluctant to introduce aversive procedures designed to reduce inappropriate behaviors in specific students. Instead, most educators would prefer to reinforce and strengthen appropriate behavior (Elliott, Witt, & Kratochwill, 1991).

A second option would be to try to keep classmates unaware of enhanced reinforcement programs. For example, a teacher could whisper words of praise to a student for working hard. Another procedure would involve the student's parents, perhaps through the process of conjoint behavioral consultation (Sheridan & Kratochwill, 1992). For example, individual contingencies contracts for each student could be developed in conjunction with each student's parent (see Kelly, 1990). The advantage to such a system

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is that parents could deliver additional reinforcement at home based on the student's behavior at school. Such systems may allow teachers to keep the student's classmates ignorant of the additional reinforcement programs and reduce classmates' objections with respect to fairness.

Peer-tutoring, self-management, and various other procedures also may be effective procedures for preventing and remedying individual student problems. Problem behavior can also be addressed by altering instructional procedures and assignments. Additionally, educators may find that adding or manipulating group contingencies allows them to prevent and remedy student problems in an efficient manner for both individual student and class-wide behavior management.

BEST PRACTICES: GROUP CONTINGENCIES

In addition to individual contingencies, there are three types of group-oriented contingencies: independent, interdependent, and dependent (Litow & Pumroy, 1975). Each type of group contingency contains the same components as individual contingencies. They include target student (e.g., Johnny), target behaviors and conditions (e.g., aggressive behavior during recess), criteria (e.g., under two times during the week), and consequences based on behaviors meeting specified criteria (e.g., opportunity to play computer game for 10 minutes). However, with group-oriented contingencies, one or more aspects of the contingency are associated with groups of students, as opposed to individual students.

Independent Group-Oriented Contingencies

Independent group-oriented contingency programs are often used to manage the behavior of groups. The term "group" typically denotes that the target behaviors, criteria, and consequences are the same across all members of the group. However, as the term independent denotes, each student receives access to the consequence based on his or her own behavior.

Independent group-oriented contingencies can be found across all levels of educational environments. For example, school districts or schools may establish punishment programs where any student engaging in a specific behavior (e.g., violating dress code) receives the same consequence (e.g., in-school suspension). Many classroom teachers establish their own independent group punishment programs designed to reduce the probability of students engaging in incidental inappropriate behaviors within their classrooms. For example, teachers commonly develop and teach their students classroom rules that identify inappropriate behaviors and the consequences for performing those behaviors (e.g., students who write on their desk will have to clean all the desks).

In addition to procedures designed to prevent inappropriate behaviors, educators also establish independent group reinforcement procedures designed to increase the probabilities of students engaging in appropriate behaviors. At the district and school level, awards are sometimes given for students for perfect attendance or obtaining consistently high letter grades (e.g., honor role or Dean's list). Within individual classrooms, teachers may establish token economies or merit systems where students earn exchangeable reinforcers (merits or tokens).

Because all students receive the same consequences for similar behaviors, independent group contingencies may be easier for educators to develop, teach to students, and consistently implement, rather than manipulating individual contingencies with distinct target behaviors, criteria, and consequences (reinforcers and punishers) for each student. Furthermore, when procedures are held constant across students and classrooms, it is easier for several education professionals to learn and implement independent group contingencies across environments (e.g., different classrooms). For example, a physical education teacher and a mathematics teacher could follow the same school-based procedures for each high school student who is late for class. Finally, when independent contingencies are implemented consistently, students, parents, and educational professionals consider these contingencies to be fairer than individual contingencies. Thus, independent punishment or reinforcement programs may be more acceptable to educators, parents, and teachers (Turco, Elliott, & Witt, 1985).

CONTEXTUAL LIMITATIONS AND SOLUTIONS ASSOCIATED WITH INTERDEPENDENT GROUP CONTINGENCIES

One of the primary strengths of independent group contingencies is that they can be used as part of proactive prevention programs designed to both increase (e.g., gold stars or letter grades of "A" for strong academic performance) or decrease student behaviors. However, there are some contextual concerns related to using independent group contingencies in educational settings. Many of these concerns are related to consequences and consequent delivery systems.

Reinforcers and Punishers Across Students. The same consequences are applied across students with independent group contingencies. In some instances, the same consequences may be reinforcing for Johnny but not for Jane and therefore have no effect on her behavior. On the other hand, a consequence that is punishing for Jane may actually be reinforcing for John. For example, being sent to the principal's office may serve as a strong punisher for Jane's acting-out behavior. However, the same consequence may strengthen Jack's acting-out behavior because it allows him to avoid doing academic assignments (i.e., negative reinforcement) or receive high rates of attention from the staff in the principal's office (i.e., positive reinforcement).

A related concern is the administration of particular reinforcers. Because some students receive access to reinforcers and others to do not, it is difficult to use activities as reinforcers. For example, teachers may want to use activities to reinforce students' appropriate behavior. However, it could be difficult for a teacher to take some students on a field trip, but not others, because teachers will have to develop other activities and find someone to monitor or teach students who did not meet criteria for earning the field trip (Skinner, Cashwell, & Dunn, 1996). Additionally, if the activities are educational it may be unethical (e.g., the students who do not meet the criteria may be most in need of the educational and motivation outcomes of the field trip), if not illegal (e.g., withholding educational opportunity from special needs students could violate their Individual Education Plan) to prevent students from participating in the activity. Finally, event or activity reinforcers are difficult to deliver to some students and not others (e.g., having a pizza party, taking a field trip). For these reasons, educators may have to rely almost solely on the use of tangible reinforcers when implementing interdependent reinforcement programs.

Reinforcer Belittling, Buying, Stealing, Forging, and Sharing. Administratively, it is relatively simple to deliver tangible reinforcers (e.g., tokens, gold stars, candy) to some students and not others. However, what happens after these reinforcers are delivered can cause problems. First, students who do not earn reinforcers may publicly belittle the reinforcers (e.g., "Lollipops are for babies."). Belittling may reduce the quality of the reinforcer for other students in the classroom. Reinforcers may also lose value for some students when students who do not earn reinforcers are able to purchase them independently. For example, in one classroom where a token economy was being run, a particular student spent 2 months earning tokens so that he could purchase a fancy multicolored pen. The day after he earned his final token and obtained the pen, a peer came to the class with the same pen that a relative had purchased for him at a local school supply store. This process appeared to reduce the reinforcing value of the pen for the student who earned it. An additional concern is if students can obtain reinforcers by performing alternative low effort behaviors (e.g., asking Aunt Joan for the pen), as opposed to having to meet classroom based performance criteria (e.g., earning 200 tokens), then the contingency is less likely to alter desired behavior (Skinner, 1998).

There are also several other ways to obtain tangible reinforcers without performing desired behaviors. One way is to steal or extort reinforcers from students who have earned them. Some students may also forge tokens or alter merit and demerit logs. In addition, an often-overlooked way in which students may obtain reinforcers is by sharing. Even though sharing may be an incidental prosocial behavior, it undermines the effectiveness of the program because students may receive reinforcers without meeting criteria. One way to address this issue is to implement punishment programs designed to decrease the probability of students stealing or forging reinforcers. However, educators generally encourage students to share with their peers; thus, attempting to discourage sharing may send students mixed messages regarding prosocial behaviors (Skinner, Skinner, Skinner, & Cashwell, 1999).

Same Target Behaviors and Criteria Across Students. Another concern is related to criteria set within the independent group contingency. It is often difficult

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for educators to set criteria that encourage all students to perform at their best, or optimal, level or academic or behavioral performance. For example, an 80% criteria to earn reinforcement may be too low for Jill who regularly makes a 95% on her spelling test. In this instance, it is possible that Jill may reduce the amount of time and effort spent studying, make lower grades, but still meet the criteria to earn reinforcement. This decrease in performance is less likely to happen when other contingencies yield reinforcement for the high scores (e.g., 95% yields better grades than 85%). The disadvantage with one criterion for all students may have a more detrimental effect on Jack who typically makes a 40% on spelling tests. When criteria to earn reinforcers are set too high, students may give up rather than attempt to reach the goal.

Public Performance Feedback and Interactions of Identical Reinforcement and Criteria. As with individual reinforcement programs, the public nature of independent group contingency programs can have an aversive impact on student relations. Because each student's behavior is reinforced or punished based on the same target behaviors and criteria, peers can determine who met the criteria if they know whether or not students receive access to reinforcers or punishers. Thus, a certain level of public feedback regarding each student's behavior accompanies public delivery of consequences. For example, a teacher may pass out tangible reinforcers (e.g., erasers) to each student who earned 90% or higher on an exam and require those who made less than 70% to complete a remedial in-seat assignment. In both cases, the consequent delivery system provides the students with information regarding their peers' performance. Many teachers avoid publicly posting each student's exam performance because it may encourage classmates to ridicule or ostracize peers who did poorly (Cashwell, Skinner, Dunn, & Lewis, 1998).

SOME SOLUTIONS TO CONCERNS

As previously discussed, it is not always easy to identify consequences that are resource efficient (e.g., activities that take little teacher and student time or cost little money) and reinforcing across students. However, educators have several options. For example, token economies can be established in which students earn reinforcers (i.e., tokens) that can be exchanged for a variety of other reinforcers. Another solution is to allow students to randomly select reinforcers, (e.g., a grab bag) based upon meeting some specific criterion (Rhodes, Jenson, & Reavis, 1993). Such procedures are more likely to be effective across students as long as some of the consequences in the pool are reinforcing to each student. Additionally, research suggests that randomly selecting reinforcers or using unknown reinforcers may result in greater behavior change than using known reinforcers (Moore, Waguespack, Wickstrom, Witt, & Gaydos, 1994).

If reinforcers are randomly selected, then it may be appropriate to include some neutral stimuli. For example, in one seventh-grade classroom after a student met the criteria they were allowed to draw a wrapped prize from a treasure chest. The treasure chest included some high quality reinforcers (e.g., token for a soft drink, candy, multi-colored pens). Additionally, the teacher included some gag prizes that could be randomly selected such as an autographed picture of himself, an empty envelope, and a sticker of a Smurf ™. The key to these silly, neutral consequent stimuli is that they may prevent some students from focusing on or ridiculing those who did not earn reinforcers.

Although randomly selecting reinforcers may prove extremely useful, it is not advisable to use the same strategy with aversive consequences. Random selection of aversive consequences is considered unfair and potentially unethical. In addition, random application of aversive consequences will likely raise concern of parents, students, and others concerned with due process issues. Thus, when using punishment, educators should be consistent and inform students before they are punished of specific behaviors and criteria that will lead to punishment and exactly what that punishment will be (e.g., teach classroom rules and specify aversive consequences for breaking the rules before students engage in inappropriate behaviors).

It is more desirable to alter and manage student behavior by implementing reinforcement programs; however, some schools may only implement independent group contingencies designed to punish inappropriate behavior. When employing punishment procedures within independent group contingencies, educators and/or consultants should ensure that punishers are aversive to all students. If consequences are neutral, then these consequences are likely to have little effect on target behaviors. When consequences intended to act as punishers are reinforcing (e.g., for some students being yelled at may serve as a reinforcing event), then the independent group contingency may actually increase inappropriate behaviors for some or all students. Because independent group punishment programs are sometimes ineffective, educational systems often have procedures or mechanisms that lead to alternative or individual programs. For example, a student who is caught destroying school property may initially receive in-school suspension. A second offense may yield longer in-school suspension, and a third offense may result in a parent-educator conference where individual contingencies are structured that allow for the development of distinct aversive consequences that may be more effective in reducing inappropriate behaviors. Thus, when the more efficient independent group punishment programs fail, school systems invest the time and resources needed to develop individual punishment programs.

Interdependent Group Contingencies

With interdependent group contingencies, every member of the group (e.g., entire class) receives access to the same consequence based on some aspect of the group's behavior (e.g., a class average on a test, no more than three unexcused absences for the class in a month). Thus, consequences are delivered to all (or none) of the students. Interdependent group contingencies are typically used in cooperative learning programs (Slavin, 1987) and class-wide peer tutoring (Greenwood, Terry, Arreaga-Mayer, Finney, 1992). Additionally, these contingencies have often been used to prevent incidental antisocial behaviors and enhance prosocial behaviors (Kelshaw-Levering, Sterling-Turner, Henry, & Skinner, 2000; Skinner, Cashwell, & Skinner, 2000).

There are several applied advantages associated with interdependent group contingencies. Because all or none of the students receive access to consequences, it is much easier to deliver reinforcers when the group meets their goal (Gresham & Gresham, 1982). It is much easier to pass out reinforcers to everyone as opposed to checking each student's performance and only giving reinforcers to those who met criteria. Furthermore, because every student receives access to these reinforcers, the probability of students stealing or sharing tangible reinforcers may be reduced. Finally, activity reinforcers such as listening to music during independent seat-work, taking educational field trips, and having the principal kissing a pig are much easier to deliver to the entire group (Skinner, Skinner, Skinner, and Cashwell, 1999).

With individual or independent group reinforcement, students are not affected by their peers' performance. However, with interdependent group reinforcement, the probability of the group gaining access to reinforcement is enhanced when peers meet criteria. Thus, interdependent group contingencies may result in diverse groups of students cooperating (e.g., encourage one another) to achieve a common goal. For example, a student may tutor peers in order to increase the group's average on an exam, or students may remind one another to take their mathematics homework with them as they prepare to leave for home.

CONCERNS

Interdependent group contingencies are efficient procedures that can be used to encourage students to work together in order to meet group goals. However, there are several limitations associated with using these contingencies with educational environments.

Consequences. Interdependent group contingencies are rated as less fair than independent group contingencies (Turco & Elliott, 1990). However, this perception may be of more concern with interdependent group punishment as opposed to interdependent group reinforcement procedures. Individual students may respond negatively when they perform well, but do not earn a reinforcer because other students performed poorly. However, students are likely to consider it even more unfair and raise stronger more forceful objections when they perform well, but are punished based on their classmates' behavior. For example, students may aggress against poorly performing peers or teachers (Barrish, Saunders, & Wolf, 1969).

Parents, students, and other educators also may object to using academic grades as consequences contingent upon some aspect of the group's behavior. Students' academic grades should be based on their own learning, not their peers' performance. Therefore, academic grades should not be the primary consequences when employing these contingencies. Instead, these contingencies can be used as additional motivation to traditional grading procedures (see Shapiro & Goldberg, 1986, for an excellent example).

Another concern with interdependent group contingencies is related to reinforcer effects across students. If a consequence that is designed to reinforce the group is actually aversive to a group member, then that group member could engage in behavior designed to prevent the group from earning access to reinforcement. For example, suppose the reinforcer was the opportunity to go to a planetarium and a particular student hated the planetarium. This student could be negatively reinforced for engaging in behavior designed to sabotage the possibility of the group meeting their collective goal (Hayes, 1976).

Target Behaviors. Although interdependent group contingencies can be used to increase desired behaviors and decrease inappropriate behaviors, educators should exercise caution when target behaviors are social and public. Research suggests that students may be more likely to threaten classmates with aversive consequences and apply those consequences to prevent peers from engaging in public inappropriate social behaviors (Pigott & Heggie, 1985). It should not be surprising that students would employ such aversive strategies as educators and other adults often establish and implement independent group punishment procedures (e.g., classroom rules) to prevent and alter incidental inappropriate behaviors.

Criteria and Feedback. With individual and independent group contingencies, failure to set criteria appropriately for each student can result in inappropriate reactions with individual students (e.g., giving up when the criteria are set too high or lowering performance to meet expectations that are too low). Because interdependent group contingencies affect an entire class, extra care must be taken when establishing criteria. If criteria are set in a manner where students lose the opportunity to earn reinforcers early, then they may no longer attempt to alter target behaviors or meet performance expectations. For example, suppose an interdependent group contingency is established where the group will receive access to reinforcement if all students arrive on time to class for an entire week. If Steve arrives late on Monday, then the entire class may stop trying to arrive to class on time for the remainder of the week because it is no longer possible to earn the reinforcer. Additionally, because this is a public behavior, this student's classmates may socially or physically punish him for this behavior.

Solutions to Concerns

Randomizing interdependent group contingency components may help prevent many problems associated with interdependent group contingencies (Skinner et al., 1996). Randomly selecting reinforcers from a pool of reinforcers is likely to prevent sabotage because some consequences in the pool are likely to be reinforcing for each student. Having students participate in the development of the reinforcers pool by suggesting reinforcers may also increase their commitment to the contingency plan. Additionally, providing a mechanism for students to periodically add to or alter the pool of reinforcers may help maintain their enthusiasm for the program.

It is fairly easy for teachers and students to develop a variety of reinforcers. Furthermore, because all or none of the students receive access to reinforcement, a variety of reinforcer options including activities can be used (Skinner et al., 1999). Activities often serve as excellent reinforcers because they can be resource efficient (e.g., listening to music during independent seat work, the principal kissing a pig). Additionally, randomly selected or mystery reinforcers may be more effective for changing behaviors (Moore et al., 1994; Rhodes et al., 1993).

Problems associated with students failing to meet criteria can also be addressed through randomization. For example, rather than specifying the criterion (no more than three instances of students failing to turn in homework for the entire week), educators could merely specify the target behavior (homework) and at the end of the week they could randomly select the exact criterion (Kelshaw-Levering et al., 2000). The teacher could have slips of paper with 3, 5, 7, 9, 11, 13, 15, etc., within a criteria pool, representing the number of homework assignments turned in. Therefore, if several students forgot their homework on Monday, the class could still earn the reinforcers if the teacher were to randomly select a lower number at the end of the week.

When random criteria are combined with random reinforcers, students may become upset and engage in inappropriate behaviors when they learn about reinforcers they could have obtained if they met the criteria. Furthermore, if the reinforcer they failed to earn is extremely powerful, students may be more likely to attempt to identify and punish group members who performed poorly. Thus, it is advisable to first select the criteria, and then only select the reinforcer when they meet the criteria (Skinner et al., 1996).

Another solution to the problems related to group criteria is to use cumulative criteria (see Skinner et al., 2000). For example, the class could earn access to group reinforcement when they turned in 100 homework assignments at 85% or higher accuracy. Thus, every instance of complete, accurate homework would bring the group closer to earning reinforcement. One teacher who used this procedure reported that the students began asking for more homework assignments. In another example, Skinner et al. (2000) reinforced students for cumulative reports of peers' incidental prosocial behavior. Thus, any incidental prosocial behavior displayed by any student and reported by any peer helped the class meet their group goal.

Within educational settings that primarily employ independent group contingencies for academic performance (e.g., grades) and inappropriate behavior (e.g., classroom rules), there are some students who rarely perform well enough to earn reinforcers. Using cumulative criteria may provide these students with the opportunity to contribute to the group earning the reinforcement and to receive access to reinforcers. Cumulative criteria may also improve the behavior and performance of these students and enhance their self-concept and attitude toward education environments (Cashwell et al., 1998).

There are some target behaviors or tasks that are, by nature, more interdependent in that they require students to cooperate. For example, many team sports and extra-curricula activities (e.g., band, cheerleading) require students to work together in order to achieve their goals. Within graduate education, school psychology programs often form research groups where the success of the group is dependent upon all members doing their part. Within general education environments, a variety of cooperative learning activities have been developed that also incorporate interdependent tasks with interdependent group contingencies. (See Kagan (1985) for an excellent summary of several cooperative learning procedures.) Thus, general education professionals can structure more cooperative tasks or assignments and use these contingencies to reinforce students.

Interdependent group reinforcement procedures encourage diverse students to work together to meet common goals. Thus, these contingencies may be most appropriate for enhancing and encouraging incidental prosocial or cooperative behaviors within educational settings. For example, group contingencies may help address generalization concerns associated with social skills. Although social skills training programs are effective in teaching students prosocial behaviors, students may not engage in these prosocial behaviors in their natural environments after they have been learned (DuPaul & Ekert, 1994). Interdependent group contingencies that target specific prosocial behavior during the school day could prove to be effective mechanism for programming for this generalization (Gresham, 1995).

Interdependent group contingencies that target incidental prosocial behaviors may also decrease incidental anti-social behaviors. For example, suppose Cindy walks into a room and drops a pile of books. Classmates could (a) ignore Cindy, (b) engage in antisocial behaviors such as ridiculing Cindy or kicking the books, or (c) engage in prosocial behaviors such as helping Cindy pick up the books. Often educators establish and implement independent punishment procedures (classroom rules) designed to prevent students from engaging in the antisocial behaviors (e.g., kicking Cindy's book or calling her a dork). To avoid punishment, students could do nothing (e.g., ignore Cindy). However, within educational environments proactive procedures should be designed to support and encourage incidental prosocial behaviors, as opposed to merely punishing inappropriate behaviors. Skinner et al. (2000) developed an interdependent group reinforcement procedure where the entire class received access to reinforcement contingent upon incidental prosocial behaviors. With this type of system, the natural classroom environment is altered so that all members of the group are more likely to receive access to reinforcers when they engage in high rates of day-to-day incidental prosocial behaviors.

Dependent Group Contingencies

Dependent group-oriented contingencies are similar to interdependent group contingencies, in that all or no member of the group receives access to the same

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consequence. However, with dependent group contingencies, access to consequences is based on the behavior or performance of one or several students.

From an applied perspective, there are several advantages associated with dependent group contingencies. First, educators are often only concerned with the behavior of one or a few students (e.g., Dick and Jane). With dependent group contingencies, educators are only required to take data on these behaviors, as opposed to the behavior of the entire group. A second advantage is that when these programs are in place, all students receive access to reinforcement when these students meet criteria. Thus, classmates may be less concerned about misbehaving students receiving extra reinforcement. Another strength of this procedure is that it can allow students who are socially neglected or rejected to gain some positive attention from their peers. For example, a teacher may reinforce the entire class contingent upon Johnny's meeting a specific goal.

LIMITATIONS AND SOLUTIONS FOR DEPENDENT GROUP CONTINGENCIES

There are many limitations associated with dependent group contingencies. The primary concern with these contingencies is how classmates will respond to target students. Because access to consequences is based on their peers' behavior, classmates may engage in undesirable behaviors in an attempt to influence their peers' behavior. For example, students may threaten target students or ridicule and ostracize them if they fail to meet the criteria to earn reinforcement or avoid punishment (Romeo, 1998). Therefore, care must be taken when implementing these contingencies.

Although dependent group contingencies are rarely used in educational settings, they have been employed in extra-curricula activities at times. For example, a coach may require the entire team to run additional laps because a teammate did not perform well during drills. While this punishment may decrease the probability of future inappropriate behaviors, it may also result in peers providing additional social and, perhaps, even physical punishment. Obviously, educators should not establish programs that indirectly encourage peers to punish each other. Additionally, peers often consider such programs so unfair and unjust (being punished for someone else's behavior) that they may avoid environments where such programs are implemented. For these reasons, dependent group punishment should not be used in educational settings.

With dependent group reinforcement programs, a specific student's performance can result in the entire class being reinforced. Again, students who are performing well often consider these programs unfair when they do not receive access to the rewards. Additionally, even with reward programs, peers may apply inappropriate pressure or threats of aversive consequences to target students.

However, dependent group reinforcement procedures can be employed in a manner that may alter students' behavior without causing negative side effects. One solution is to use random procedures when selecting target students (Gresham & Gresham, 1982). For example, a teacher may establish a contingency where the entire class receives access to reinforcement if a randomly selected student makes 90% or higher on an exam. Because exam grades are not made public, the teacher could randomly select a student's name, check the one score only, and then inform the class if they will receive access to the reinforcers. The key here is that if the randomly selected student did not meet the criteria, then the teacher would not announce the student's name. However, if the student did meet the criteria, then the teacher could announce the student's name. This process may actually encourage peers to socially praise the student who performed well, as opposed to socially and perhaps physically punishing the student who performed poorly. In fact, one teacher set high criteria on a history test for an entire class of seriously emotionally disturbed students to receive a group reward (Skinner & Watson, 1995). The only student who consistently met these high criteria was a quiet child who displayed poor social skills and was often rejected or neglected by his classmates. Thus, when it came time to draw the name, the entire class was chanting the neglected student's name. When it was drawn and announced, the student received a burst of verbal and physical praise and encouragement (high fives all around) from his peers. Such positive interactions with peers were rare for this student.

SUMMARY

Group contingency management procedures have been extremely effective for altering student behaviors. A meta-analysis examining the impact of interventions on students' disruptive classroom behaviors showed that group contingencies yield greater effect sizes than any other interventions reviewed (Stage & Quiroz, 1997). Additionally, because group contingencies are designed for use across groups of people, they can easily be assimilated into educational environments. However, contingency management programs are similar to other effective intervention and prevention procedures in that inappropriate application of these programs can have a negative impact on classroom environments (e.g., encourage students to punish peers, make students feel that they are being treated unfairly or unjustly).

Unfortunately, many psychologists, educators, and researchers have focused on the undesirable side effects associated with the inappropriate application of behavioral procedures in general and, more specifically, group contingencies. For example, Romeo (1998) discouraged the use of group contingencies in classroom settings but (a) failed to differentiate between the different types of group contingencies, (b) suggested that all group contingencies cause negative side effects because they cause students to socially punish peers, (c) provided no analysis of procedures that can be used to mitigate negative side effects when using various group contingency procedures, and (d) neglected to discuss and analyze any of the positive side effects associated with these contingencies (e.g., students who rarely earn reinforcement gaining access to reinforcers, encouraging diverse students to interact in a positive goal-directed manner).

School psychologists are committed to the practical, efficient, and effective procedures that can prevent student learning and behavior problems. The current chapter provides a balanced analysis of group contingencies and specific recommendations for implementing these procedures in educational environments. This information should make readers aware of the many different modifications that can be made to various contingency management programs that can (a) mitigate negative side effects associated with contingency management procedures, (b) enhance the effectiveness of contingency management programs in preventing or remedying target behaviors, and (c) also enhance positive side effects associated with contingency management programs. This information should allow school psychologists to design and consult with educators (e.g., teachers and administrators) to develop and implement more effective and efficient contingency management programs within the context of educational environments.

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This databased intervention article provides a good example of how randomized contingency components can be applied within educational settings to reduce disruptive behaviors while minimizing the probability of negative side effects. This article serves as an excellent model for researchers interested in studying the impact of randomized group contingencies.

Litow, L., & Pumroy, D. K. (1975). A brief review of classroom group oriented contingencies. *Journal of Applied Behavior Analysis, 8*, 431–347.
This brief expository article provides an excellent overview of group contingency procedures with a focus on classroom applications. A particular strength of this article is the manner in which contingencies are defined.

Shapiro, E. S., & Goldberg, R. (1986). A comparison of group contingencies for increasing spelling performance among sixth grade students. *School Psychology Review, 15*, 546–557.
This databased article compares the impact of various group contingencies on academic performance. The methods section provides excellent guidance for how different group contingencies can be implemented with educational settings to promote academic performance.

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This databased program shows how interdependent group contingencies can be applied within in elementary school classrooms. This study provides an excellent example of using interdependent group contingencies to encourage and support incidental appropriate social behaviors.

53 Best Practices in Teaching Study Skills

Virginia Harvey
University of Massachusetts, Boston

OVERVIEW

Study skills can be taught to students of all ages and abilities and, when practiced and monitored by the student, make a substantial difference in student achievement (Hattie, Biggs, & Purdie, 1996). Students who organize their time well, have good test-taking skills, and identify and learn main ideas are able to achieve higher grades and perform at higher levels on standardized tests even when diagnosed as behavioral disordered (Foley & Epstein, 1992). Often instruction in study skills is neglected because it is assumed that students learn these skills on their own, have mastered them at an earlier level (Devine, 1987), and know enough about their own learning to be able to generalize strategies across academic domains. Unfortunately, these assumptions are often unfounded.

According to Hattie, Biggs, and Purdie (1996), study skills interventions can focus on *affective considerations* (motivation and locus of control), *metacognition* (planning and monitoring learning), and *cognitive strategies* (specific strategies). When students do not have the affect, metacognition, and cognitive strategies necessary to be good students, a large proportion are referred to school psychologists. Interventions to improve study skills can often take place in prevention or pre-referral programs, thereby preventing the need for extensive assessment and restrictive placement.

BASIC CONSIDERATIONS

Studying is deliberate and purposeful learning that is pursued autonomously. It is therefore important to consider the ability to self-organize and self-evaluate as well as use specific strategies (Gettinger & Nicaise, 1997; Hoover, 1990). Research has not consistently demonstrated one study technique as superior to others. Students with effective study habits use a variety of techniques and are able to articulate their reasons for choosing particular tactics for particular assignments (Wade, Trathen, & Shaw, 1990). Students should be taught various tactics and methods to monitor success.

The most important consideration in improving study skills is to incorporate fundamental principles of effective learning into studying. Learning requires the ability to focus on important information, tie new information to previously learned material, space and repeat trials, involve multiple senses, incorporate corrective feedback, monitor learning, and take steps to increase comprehension. There are multiple methods available for incorporating these principles described in this chapter. Increasing focus on important information can be accomplished by outlining, taking notes, mapping constructs, pre-reading, or modifying reading strategies. Tying new information to previously learned material can be accomplished by linking or mnemonics. Spacing and repeating trials can be accomplished with the SQ3 method in reading or the use of the Cornell method in note taking. Methods to incorporate corrective feedback include collaborative learning, reviewing corrected homework and tests, interactive videodisk instruction, or the writing process.

Students should not be expected to use all of these methods for every subject, as that would be needlessly time consuming. The number of study skill strategies used has not been found to correlate with achievement (Foley & Epstein, 1992), and students are very unlikely to use every type of study skill (Slate, Jones, & Dawson, 1993; Stanley, Slate, & Jones, 1999). Effective study strategies include the abilities "to plan and control, to think and inquire, and to reflect and self-evaluate" (Gettinger & Nicaise, 1997). The school psychologist's role is to help determine which learning principles are being neglected and to help teachers and student(s) select the most helpful strategies from a menu of methods. Appropriate strategies will vary according to the student's style of learning and personal habits, the subject matter, and the teacher's approaches.

School psychologists' training facilitates their work in assessing and improving students' study skills. Integral to work in this area is knowledge of human learning and memory, skill in assessing individual differences and applying curriculum-based assessment, knowledge of learning styles, skill in consulting with parents and teachers, expertise in ecological assessment, an understanding of the importance of metacognition, knowledge of factors resulting in increased treatment adherence, and knowledge of the scope and sequence of instruction in all subject areas. In addition, school psychologists need knowledge and skills in direct interventions including co-teaching, behavior management plan implemen- tation, anxiety reduction strategies such as progressive relaxation exercises, basic counseling strategies, and skill in providing in-service training to teachers.

BEST PRACTICES

Assessing and improving a student's ability and desire to manage work and time effectively through the improvement of study skills can be one of a school psychologist's most effective interventions. Best practice includes collaborating with regular educators to teach study skills in conjunction with established curriculum (Langer & Neal, 1987; Slate, Jones, & Dawson, 1993). Teaching study skills in conjunction with a social studies curriculum and leading teacher seminars on study skill improvement raised student exam scores from the failing to the honor roll range (Leland-Jones, 1997). Individually meeting with students to review their cumulative files (grades, tests scores, and attendance), helping students develop learning goals, providing in-service workshops on improving study skills, and teaching study skills in the regular classroom resulted in a three-grade equivalent improvement on standardized test scores in one year (Carns & Carns, 1991). If taught in isolation, study skills are unlikely to be maintained or to transfer from one setting to another. Therefore, effective remediation requires that the school psychologist, teacher, and parent work closely together to determine appropriate procedures, designate responsibilities, and design techniques to encourage generalization.

Assessment of Existing Study Skills

Study skills should be assessed whenever the referral question concerns academic effort or behavior. Formal instruments for assessing study skills exist (Pintrick, Smith, Garcia, & McKeachie, 1991; Weinstein & Palmer, 1990), and some are available in a computerized format (Tait & Entwistle, 1996). However, these have been criticized for ignoring the essential component of metacognition (Kiewra, 1996). Given that there is not a reliable tool to cover the broad band of critical issues, the most productive method is ecological assessment that investigates in several domains. There are five basic steps:

1. Interview the teacher and parent during a prereferral conference, using the Study Skills Assessment Checklist (Table 1) to determine general areas of weakness.

2. Observe the student in class and analyze work samples to obtain further information. Selectively use the Checklist of Classroom Qualities that Foster Study Skills (Table 2) during the observation.

3. Interview the student. Selectively use questions from the Study Skills Assessment Checklist and the Student Interview Questions (Table 3). Observe carefully while the student completes academic work in your presence. Have the student describe work methods, approaches to studying, and weekly schedule. Have the student show and describe textbooks, notebooks, assignment books, and completed work. Assess the affect and metacognition (see below).

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Table 1. Study skills assessment checklist

Affective considerations

- Does the student understand that he or she has some control over his or her life and academic achievement?
- Is lack of motivation a concern? Is the purpose of learning the material understood?
- Does the student have learning goals?
- Is the student motivated to use study skills?
- What kind of homework does the student enjoy? Dislike? Why?
- What does the student like about the way he or she handles homework? Dislike?
- Does the student suffer from disabling academic anxiety?

Metacognition

- Does the student have metacognitive skills that enable him or her to assess his or her own level of knowledge?
- Does the student consider the type of reading material in planning how to approach a reading assignment?
- Does the student plan for learning? For example, are all materials necessary for homework completion brought home? Are sufficient supplies available?
- Does the student estimate how long it will take to complete an assignment? Is this time estimate used to make a daily schedule? Is the schedule followed?
- Are short-term assignments kept track of in a book or log? Are long-term assignments, tests, reports, and projects kept track of in a calendar?
- Does the parent regularly check the assignment calendar/homework sheet with the child, as well as checking for notices, permission slips, and other school communication?
- Does the teacher regularly check the assignment calendar/homework sheet and monitor homework completion?
- Does the teacher make expected study strategies explicit, discuss recommended approaches regularly in class, and convey to students that he cares about and desires their success?
- Is there a regular, quiet time to study at home?
- Is there adequate communication between the home and school to support homework completion?
- Is there adequate support at home to foster good study strategies?
- What does the student do when unable to understand something at home?
- Can the student asses his or her own preferred learning style to determine the best environment for studying, and then work with his or her family to obtain this enviroment? Where does the student prefer to do homework? Is there a place at home to study that is quiet and well lit, with a table or desk?

Cognitive strategies

Organization

- Are assignments turned in with a label, name, and date? Are they neat? Are they complete? Are assignments checked for errors, and corrected, before being turned in?
- Does the student (grade four and below) keep one folder for assignment sheets, with "work to do" on the left and "work to turn in" on the right?
- Does the student (grade five and above) keep a loose-leaf notebook or notebooks organized chronologically, by subject?
- Does the student come to class with notebook, pencil, completed homework, and textbook?
- Is the student's desk, cubby, or locker neat enough that the student can locate required materials quickly?

Listening skills

- Are directions understood?
- Are directions followed?
- Does the student listen in class?

Note-taking skills

- Are notes taken in class? Does each page of notes have the date and topic written at the top?
- Are details added to class notes as soon as possible after class?
- Is a note-taking system used?
- Are relevant reading materials pre-read before the lecture on the same material?

Reading skills

- Does the student pre-read?
- When there are words that the student does not understand in the reading, does the student determine their meaning and write them down?
- Is the student easily distracted or bored while reading?

(Table continues on the following page.)

Table 1. (continued)

- Are personal copies of textbooks available to the student? Does the student know how to take notes in textbooks by highlighting or making margin notations?
- Is a reading technique used when reading difficult assignments?
- Does the student outline or take notes from reading assignments?
- Does the student know how to "map" a reading?
- Does the student know how to summarize effectively?
- Does the student use headings and other typographical aids? Can the student read tables, charts, and graphs? Does the student know how to use the table of contents and index of a book?
- Is the student able to comprehend textbooks?
- Can the student predict outcomes, distinguish fact from opinion, discern emotional appeals, recognize bias, and discern inference?

Math and science skills

- Does the student work on math and science problems on a daily basis?
- Does the student employ an outline or use 3 x 5 flash cards to help learn and remember definitions, important ideas, key examples, and theorems?
- Does the student know how to use a scientific calculator? A graphing calculator?
- Does the student estimate the answer in conjunction with using a calculator?
- Does the student review problems already completed? Does the student try new problems that were not assigned?
- Does the student choose problems from a variety of sections to test understanding?
- Does the student participate in a study group?

Reporting skills

- Does the student know how to find information using books, maps, graphics, newspapers, dictionaries, libraries, the Internet, and other reference tools?
- Can the student use the computer catalogue in the library and then locate the material? Can the student use the periodical index?
- Does the student organize papers, by outlining or using a story map, before writing? Does the student write a first draft?
- Does the student proofread for success/failure in answering the purpose of the assignment, legibility, neatness, spelling, complete sentences, and punctuation errors?
- With which reporting techniques is a student familiar? Most capable? Which does he or she prefer?
- Is the student skilled in using word processing for assignment completion?

Test-taking habits

- Does the student space learning over several sessions (versus cramming) and use a study plan? Does the student conduct weekly reviews?
- Does the student study using the SQ3R (see Reading Study Skills) or a similar method?
- Does the student predict test questions?
- Does the student know and use good test-taking strategies?
- Does the student make use of study guides prepared by the teacher?

4. Determine appropriate intervention techniques. The most effective strategy is the incorporation of techniques into instruction, preferably for all students in a class. Several commercial materials are available as curriculum guides for classroom instruction in general study skills, some of which are listed in Table 4. Other possible intervention approaches include individual instruction, bibliotherapy, computer assisted instruction, the Internet, teacher consultation, teacher training, and/or district curriculum consultation. As was mentioned previously, the school psychologist's role is to help determine which learning principles are being neglected and to help teachers and student(s) select and implement the most helpful strategies from a menu of methods.

5. Develop a plan of maintenance and generalization for the interventions. The implementation of interventions requires ongoing monitoring until the behavior is used consistently (Table 5).

Affective Considerations

Does the Student Understand That He or She Has Some Control Over His or Her Academic Achievement? Students whose locus of control is primarily external will need to be led through successful expe-

Table 2. Checklist of classroom qualities that foster study skills

General	Tasks are stimulating and challenging.
	Students are treated as individuals with varied needs and talents.
	Regular successes are experienced by the students and displayed.
	The classroom is organized.
	The classroom has minimal distractions and is quiet for independent work.
	Expectations for students are clear.
	Students are not subjected to public humiliation or criticism.
	Before speaking, the teacher gains the attention of the class.
	Students are encouraged to self-evaluate their learning and study strategies.
	Students are encouraged to set learning goals.
Assignments	The teacher gives assignments both orally and in writing.
	Assignments are clear and work models are provided.
	The teacher checks that students write assignments in an assignment book.
	Homework assignments follow successful classroom practice.
	Worksheets have sufficient writing space and are dark enough to read.
	Work is collected, corrected, and returned promptly.
Lectures	Unfamiliar concepts are taught before lectures or readings.
	Students are taught to relate material to their own lives.
	Frequent examples are given in class.
	Visual aids are frequently used.
	Relevant material is distinguished from irrelevant material.
	The teacher frequently checks for students' understanding.
	To increase understanding, the teacher rephrases and simplifies.
Reading	Students are taught to recognize a speaker's or writer's purpose.
	Students are taught to note transitions in the talk or text.
	Students are taught to recognize main points, details, and sequence of ideas.
Math	Students are given review, current, and challenge problems.
	Students are encouraged to participate in collaborative learning groups.
Note-taking	Students are taught to take notes.
	Students are taught how to summarize.
	Students are taught how to draw conclusions and make inferences.
Tests	Tests are administered in a low-anxiety atmosphere.
	Students know test question formats and are given example test questions.
	Partially completed study guides are provided.
	The material to be covered on tests is clear to students.

riences to help them understand that the effort they expend relates to the outcome they experience, and that their success in school is not simply an effect of innate ability or luck. One method of linking personal success to effort can be to ask students "when" questions, such as (to a non-reader), "How old do you think you will be when you learn to read?" Another is to have each student track study activities and resultant success.

Is Lack Of Motivation A Concern? Is the Purpose of Learning the Material Understood? To increase motivation and the ability to comprehend material, students need to understand the purpose of the material, including why the teacher assigned the material and how the assignment relates to students' learning goals. Understanding the purpose of reading material also includes understanding the author's intentions and reading actively to answer questions. Similarly, students often need help bridging the information they are learning in math, science, and social studies to their lives. Group discussions, individual counseling, and discussions led by older students can be helpful in this regard.

Does the student have learning goals? These should be both general ("go to college") and specific

Table 3. Student interview questions

About you	1.	What do you like to do best?
	2.	What do you like to do least?
	3.	What do you do especially well? What are your strongest skills and abilities?
	4.	What do you do least well?
	5.	What are five jobs you might like to have as an adult?
	6.	What would you like to know, and know how to do, when finished school?
About school	7.	What are your favorite school activities?
	8.	What do you dislike most about school?
	9.	Why do you think you don't do well in school?
	10.	What are five skills you believe are important to succeed in school?
	11.	What grades do you want to get in school?
	12.	Looking at the grades, test scores, and attendance records in your cumulative file, do you see any patterns? How do you explain them?
	13.	What are your main academic goals for the next year? For the future?
About home	14.	What grades do your parents want you to get in school?
	15.	Do your parents praise you for your school work?
	16.	Where do you like to study? When?
	17.	How much sleep do you get each night?
	18.	What type of exercise do you get? How often?
	19.	What chores do you have at home?
	20.	Keep a log of your studying activities for a week, blocked off in half-hour units.

("obtain a score of 80% on tomorrow's test"). Having students write long and short-term goals for each subject, such as math, and converting them into weekly planners, including study strategies, can be a very effective intervention (Seon & King, 1997).

Is the Student Motivated to Use Study Skills? Rauch and Fillenworth (1995) asked students what motivated them to use, or discouraged them from using, new study strategies. They found that students often did not know how to apply strategies to particular classes, felt they would take too much time, and had difficulty integrating the new strategies into their study habits. Thus, study skills should be (a) related to particular courses and monitored, (b) associated with positive and responsive teacher-student relationships, and (c) incorporated into students' goals.

What Kind of Homework Does the Student Enjoy? Dislike? Why? Many students assume they dislike all types of homework when they actually do like some types (projects, perhaps). Knowing homework preferences helps in developing a homework schedule. Some students prefer to get the disliked homework done first, while others prefer to do their easier work first. Students can be made aware that when they dislike a subject they can find ways to make it less frustrating. For example, they might set themselves a goal of doing five math problems and then taking a stretch.

What Does the Student Like About the Way He Handles Homework? Dislike? Whatever students dislike about the way they handle homework can be subjected to a brainstorming session, and one of the solutions brainstormed can be chosen, tried, and evaluated. For example, a student may dislike a habit of procrastinating, and may decide to try self-rewarding by telephoning a friend or shooting baskets after completing an assignment.

Does the Student Suffer From Disabling Academic Anxiety? Excessive anxiety can result in poorer test performance (Beidel, Turner, & Taylor-Ferreira, 1999). Studies have found that test anxiety affects one-third to one-half of intermediate level students. Anxiety is often identified by individual students during individual interviews, in written self-analysis, or on self-report scales (Reynolds & Richmond, 1985). When students are not sufficiently self-aware to identify anxiety, it can be evident behaviorally such as when they perform significantly better on practice tests than on actual tests.

Achievement anxiety can be addressed directly or indirectly. Direct interventions include relaxation

Table 4. Study skill curriculum materials

Publisher	*Title*	*Level*
Brookline Books Cambridge, MA: (1-800-666-BOOK).	Luckie, W. R., & Smethurst, W. (1997). *Study power: Study skills to improve your learning and your grades.* Useful text for study skills workshops: includes students exercises.	High school and college
Camden College, Blackwood, NJ www.geocities.com/CollegePark/Quad/4392/index.html	Basic math and algebra for the community college adult learner.	
Center for Applied Research in Education West Nyack, NY	Mannix, D. (1989). *Be a better student: Lessons and worksheets for teaching behavior management in grades 4–9.*	Grades 4–9
St. Thomas University, St. Paul, MN www.iss.stthomas.edu/studyguides/	Instruction support services/learning. Very comprehensive: extensive resources and multiple links to other sites.	
College of St. Benedict and St. John's University, MN www.csbsju.edu/academicadvising/	Study skills guides. Comprehensive guides.	
Crowell Press New York: Harper & Row 10 E. 53rd St. New York, NY 10022	Wirths, C. G., & Bownan-Kruhm, M. (1987). *I hate school: How to hang in and when to drop out.* Focuses on helping students set academic goals and strategize methods to accomplish them.	15–18
Free Spirit Minneapolis, MN: (www.freespirit.com).	Schumm, J. S., & Radencich, M. (1992). *School power: Strategies for succeeding in school.* Useful as a classroom text.	10–16
	Romain, T., & Verdick, E. (1999). *True or false? Tests stink!* And Romain, T. (1997). *How to do homework without throwing up.*	8–13
Hawthorne Educational Services 800 Gray Oak Dr. Columbia, MO 65201	McCarney, S. D., & Tucci, J. (1991). *Study skills for students in our schools.*	8–18
Houghton Mifflin	Ellis, D. B. (1996). *Becoming a master student.* Addresses responsibility, time management, memory techniques, critical thinking, writing skills.	High school and college
Rosen Publishing Group 29 E. 21st Street New York, NY 10010	Ottens, A. J. (1991) *Coping with academic anxiety.*	12–17
University of Minnesota-Duluth www.d.umn.edu/student/loon/acad/strat	Study strategies homepage. Contains a study skills checklist and questionnaire.	
University of Texas www.dla.utexas.edu/depts/ams/lskills	Basics of reading: American Studies Learning Skills	
Virginia Polytechnic Institute www.ucc.vt.edu/stdysk/stdyhlp.html	Study skills self-help information. Accessible and well organized.	
New York: Morrow/Avon 105 Madison Ave. New York, NY 10016	Gilbert, S. D. (1998). *How to take tests* James, E., & Barkin, C. (1998). *How to be school smart: Secrets of successful schoolwork.*	12–18 8–12
Wilmington, MA: Great Source Educational Group 181 Balbidvale St. 01887	Sebranek, P., Meyer, V., and Kemper, D. (1998). *Write source 2000.* Facilitates instruction in writing and study skills.	10–13

Table 5. Student study strategy plan

Methods I will use to	*Subject 1*	*Subject 2*	*Subject 3*
Focus on important information			
Space and repeat learning			
Use more than one approach			
Include corrected work			
Increase comprehension			
Know when I have studied enough			
Keep motivated			
Number of hours I plan to study			
Grade expected			
Grade received			
Comparison of plan and actual studying			
Conclusions			

and/or slow breathing exercises, cognitive behavioral therapy, exercise, meditation, yoga, or even medication. Indirect interventions include instruction in study skills. A comprehensive 11-week program for teaching study skills, modifying behavior, and improving test-taking strategies was found to significantly reduce test anxiety and increase academic performance (Beidel, Turner, & Taylor-Ferreira, 1999). Similarly, in a meta-analysis of research studies on study skill training, Hattie, Biggs, and Purdie (1996) found that instruction in study skills reduces anxiety.

Metacognition

Does the Student Have Metacognitive Skills That Enable Him or Her to Assess His or Her Own Level of Knowledge? Metacognition involves knowledge about and regulation of cognition and results in the ability to evaluate, monitor, and make goals and plans for one's own learning (Brown, 1980; Flavell, 1979; Puntambekar, 1995; Tobias, Everson, & Laitusis, 1999). Good students articulate learning goals, control learning, see it as purposive, reflect on strategies, and monitor the effectiveness of a variety of learning strategies (Puntambekar, 1995).

Several strategies can be employed to increase metacognition. Learning to estimate one's level of knowledge accurately (as assessed by test performance) positively correlates with reading and math achievement, self-monitoring, and strategic help-seeking (Tobias, Everson, & Laitusis, 1999). These skills can also be enhanced by using specifically designed computer programs (Puntambekar, 1995) or through individual or group interventions. As suggested by Sweidel (1996), students can develop "study strategy portfolios" in which they outline and commit to a study plan (noting where, when, and with what strategies they will study) and examine their study strategies (asking: How do you know when you have studied enough? How do you monitor your studying? How do you keep yourself motivated? How many hours do you plan to study? How do you go about reading the material? Did you follow your plan? Did you make modifications? How prepared do you feel? How many hours did you actually study? Do you plan to make changes to your study plan in the future? What grade do you expect to get?). After students receive graded tests and assignments, they compare their study plan and activities with their academic achievement, indicate their satisfaction, and determine which strategies were most and least successful. With each unit the plan is modified, using reflection as a tool to assess and change their own performance (Sweidel, 1996).

Does the Student Consider the Type of Reading Material in Planning How to Approach a Reading Assignment? In approaching a reading task, students should assess the demand of the assignment, select a reading approach accordingly, find effective methods to focus attention on the important ideas, and monitor reading comprehension through self-questioning and review (Scott, Wolking, Stoutimore, & Harris, 1990). The rate of reading should be considerably slower when the student is studying or reading difficult material than when reading comfortable material for pleasure. The student should assess "clicks" (understanding) and "clunks" (non-understanding) at the end of each page, and when non-understanding occurs, take remedial steps such as slowing down, re-reading, looking up material, reading about the same topic in an easier source, asking for help, or making a visual map (Schumm & Radencich, 1992).

Does the Student Plan for Learning? For Example, Are All Materials Necessary for Homework Completion Brought Home? Are Sufficient Supplies Available? "Forgetfulness" can be alleviated by home-school collaboration. At school, the teacher can remind students to check that they have their homework and necessary materials before the dismissal bell. At home, parents can implement a simple behavior management system to reinforce bringing materials home. One effective technique is to require the student to spend time on academic activity even when homework was forgotten. Other parents solve the problem by having the child walk back to school to get forgotten materials or by charging gas money for return trips to a distant school. The following supplies and materials are often necessary: textbooks, index cards, loose leaf notebook paper, folders, spiral notebooks, file cabinet or crate, encyclopedias, dictionary, desk or table, assignment book, calendar, and project supplies.

Does the Student Estimate How Long it Will Take To Complete an Assignment? Is This Time Estimate Used to Make a Daily Schedule? Is the Schedule Followed? Students often have unrealistic ideas of the length of time it takes to complete given tasks. Timing a student completing a worksheet or reading assignment can produce helpful planning guidelines from which goals and check points can be determined. Daily schedules should be written down. If keeping to the schedule becomes problematic, then a behavior management system can be implemented.

Are Short-Term Assignments Kept Track of in a Book Or Log? Are Long-Term Assignments, Tests, Reports, and Projects Kept Track of in a Calendar? assignment books or sheets and calendars should be required of all students who are expected to complete work independently. Increasingly, schools are posting assignments on Internet websites, which can be helpful for those students with Internet access. If a student has considerable difficulty writing down assignments, even with monitoring by the teacher, then a "buddy" can be seated next to the child to make sure assignments are recorded.

Students need specific guidance in learning how to break long-term assignments into small components and integrate the components into their assignment books. The use of a calendar becomes critical for older students who have multiple long-term assignments and multiple teachers.

Does the Parent Regularly Check the Assignment Calendar/Homework Sheet With the Child, as Well as Checking for Notices, Permission Slips, and Other School Communication? Does the Parent Monitor Homework Completion? Children generally need help from their parents in prioritizing activities, establishing consistent homework and bedtime routines, and organizing books, notebooks, and papers for return to school. Even more important, students need their parents to provide structure and praise. Generally, students need less supervision as they get older, and by junior high they often make and keep their own homework schedule. Some adolescents, particularly students with learning disabilities, will continue to need considerable parental involvement.

Does The Teacher Regularly Check the Assignment Calendar/Homework Sheet and Monitor Homework Completion? If home-school collaboration is to be effective, then the strategies must be appropriately monitored by all stakeholders.

Does the Teacher Make Expected Study Strategies Explicit, Discuss Recommended Approaches Regularly in Class, and Convey to Students That He or She Cares About and Desires Their Success? Even at the university level, instructors find that they must express their desire for students to understand the material for students to be successful and motivated learners (Boelkins & Pfaff, 1998).

Is There a Regular, Quiet Time to Study at Home? Helping parents and students agree upon a study hour is one of the simplest, yet most effective, interventions. Finding a quiet time to study can be very challenging in busy households, and the establishment of a daily study hour must take into account already scheduled extracurricular activities, chores, favorite TV shows, computer games, and the recreational use of the Internet. In addition to these factors, the student's ability to concentrate at different times of the day should be considered. Some can focus much better in the early morning, others after supper, and others right after school. Many elementary school children are too tired after dinner to be able to concentrate efficiently, demonstrated by their being easily frustrated and slow to complete tasks. Ideally, the family agrees upon a study hour, the television and other distractions are turned off, phone calls are not taken, and the entire family studies, reads, or completes paperwork.

Is There Adequate Communication Between the Home and School to Support Homework Completion? School personnel expect that students will study at home. The expectation for independent reading and studying increases in the higher grades. Home-school collaboration is imperative. Teachers need to communicate with parents about problems with homework, and parents need to be available to help with homework and organization. Parents should let teachers know when excessive time is being spent on homework, particularly by disabled students, so assignments can be modified.

Is There Adequate Support at Home to Foster Good Study Strategies? When studying at home is not possible or parents are unable to help the child study appropriately, the school psychologist can help the student develop alternative locations and supports. For example, many schools and community organizations such as Boys and Girls Clubs have after-school programs for elementary school students that include supervised study periods. Most high schools have after-school help provided by teachers, although students may need help accessing transportation. These can supplement supportive study halls during the school day.

What Does the Student Do When Unable to Understand Something at Home? Some parents are clearly more skilled at helping with homework than others, and some students have no one whom they feel comfortable asking for help. If this is the case, students will need help brainstorming how they might solve this dilemma. Sometimes a neighbor or another family member (older sibling, cousin, or grandparent) can be helpful; some communities have a homework hotline; and some students prefer to ask a teacher for help before school, after school, or via e-mail. Often it is helpful for students to have "study buddies," peers who share telephone numbers and call one another for help or to talk through assignments. In advanced math and science, collaborative learning with study buddies and study groups can be extremely helpful methods for increasing comprehension (Derek Bok Center for Teaching and Learning, 1993; Treisman, 1992).

Can the Student Assess His or Her Own Preferred Learning Style to Determine the Best Environment for Studying and Then Work With His or Her Family to Obtain This Environment? Where Does the Student Prefer to do Homework? Is There a Place at Home to Study That is Quiet and Well Lit, With a Table or Desk? Where a student prefers to study needs to be taken into account. For many students, the ideal location is an environment devoid of distractions. Some students find working in their own room difficult because they are tempted by distractions or they are lonely and seek attention to alleviate loneliness. Such students may study better at the kitchen table or another location. Other students may prefer to work at the library, and transportation will need to be negotiated. The most effective strategy is for a student to study in one place, so efficient studying is associated with that location.

Cognitive Strategies

ORGANIZATION

Are Assignments Turned In With a Label, Name, and Date? Are They Neat? Are They complete? Are assignments Checked For Errors and Corrected Before Being Turned In? Students need to develop the habit of automatically checking their work before turning it in. One method is for the teacher to give the entire class time to check over their work before collecting it, and fade active monitoring across time. On the individual level, papers can be turned back to the student (non-punitively) when it is apparent that checking is needed. The acronym COPS can be used to remind to check for Capitalization, Overall appearance, Punctuation, and Spelling (Wiens, 1983).

Does the Student (Grade Four and Below) Keep One Folder for Assignment Sheets, With "Work To Do" On the Left and "Work To Turn In" On the Right? This is an extremely effective method for managing worksheets in the lower grades. Often children at this age level find "Trapper-keepers" and notebooks too cumbersome and confusing.

Does the Student (Grade Five and Above) Keep a Loose-Leaf Notebook or Notebooks Organized Chronologically, By Subject? Organizational skills have been found to be significantly correlated with both standardized test results and academic achievement (Foley & Epstein, 1992). Loose-leaf notebooks are most efficient because handouts and notes from the textbook can be added in chronological order. Each subject should be separate. There should also be a pouch for supplies and a section for assignments. To be effective, notebooks must be maintained in an organized manner, which requires monitoring by teachers for several years.

Does the Student Come to Class With Notebook, Pencil, Completed Homework, and Textbook? Students need a certain place at home to keep materials "to go to school." It is important that this place not be cluttered with other materials.

Is the Student's Desk, Cubby, or Locker Neat Enough to Locate Required Materials Quickly? Teachers can designate times for the entire class to clean out both desks and notebooks. Students with severe organizational problems will need an adult or organized friend to help sort their papers. Unscheduled and scheduled checks, with rewards for good organization, are helpful. For students who become disorganized between classroom cleanups (for some students this can be daily), a cleaning routine should be established, with neatness criteria, timeline, and reinforcements so major cleanups are not necessary.

LISTENING SKILLS

Are Directions Understood? The comprehension of oral communications is often assumed, yet students frequently do not understand what is said to them. Comprehension of directions can be checked by having students tell you, in their own words, what needs to be done. It is helpful for younger students to write (circle, if the directions are written) each action word, number each action, and cross off each number after completion (Kuepper, 1990).

Are Directions Followed? If students understand the directions, yet still do not follow them, then perhaps they do not attend to directions or they do not want to follow directions. The former can be remedied by having the student read the directions sub-vocally before starting the paper. Lack of desire to follow directions needs to be further explored in an expanded student interview to determine the function of the behavior and benefits (such as adult attention) the student gains from noncompliance and to delineate alternate methods to obtain the same benefit.

Does the Student Listen In Class? Not listening in class can be caused by many factors, including chronic or intermittent hearing loss, preoccupation with personal issues, a boring presentation, weak listening skills, or deficiencies in auditory processing. Listening skills can be assessed by using standardized instruments including the Woodcock-Johnson Psychoeducational Battery-Revised (McGrew, Werder, & Woodcock, 1991) or the Clinical Evaluation of Language Fundamentals-Revised (Semel, Wiig, & Secord, 1989). The latter assesses comprehension of oral directives, sentence structure, linguistic concepts, and oral paragraphs.

NOTE-TAKING SKILLS

Are Notes Taken In Class? Note taking has several advantages, including the improvement of material acquisition. Students who take and review notes score higher on tests than students who do not (Baker & Lombardi, 1985). Further, the more often notes are reviewed, the better the achievement. Having students mark a "review tally" each time they review their notes encourages spaced reviews (Lazarus, 1996).

Does Each Page of Notes Have the Date and Topic Written At the Top? Notes should be orderly, labeled, and legible, written in the student's own words, and contain all key words and some supporting details.

When listening to lectures, students tend to miss 50% or more of the main ideas (Baker, & Lombardi, 1985). Therefore, teachers should assess students' abilities to take orderly notes, and provide supervised practice as appropriate.

A very effective method to teach note-taking skills is to provide "flexible skeletons," or outlines of lectures with missing material. As the lecture proceeds, students fill in the missing portions of the outline. At the end of the period, the teacher can check randomly chosen outlines for accuracy.

Are Details Added to Class Notes As Soon As Possible After Class? Completing notes right after class is extremely beneficial because it provides another learning trial and students are better able to remember and correct details if only a short time has elapsed.

Is a Note-Taking System Used? Learning-disabled students are often encouraged to use laptop computers for in-class note taking. The use of an outlining function in a word processing program can be an effective tool for this purpose, and some computer programs have the additional capacity to move from an outline function to a graphic organizer function (Anderson-Inman, Knox-Quinn, & Horney, 1996; Tenny, 1992). Computers can act as an intermediary between print and understanding by enabling the student to manipulate information, structure hierarchically, insert additional information and delete unessential information, and reorganize the information. Computers also facilitate moving from one source (file or program) to another and enable the student to view information from multiple perspectives (Tenny, 1992).

The Cornell Method (Pauk, 1974) is elaborate and time consuming, but effective. The student *Records* notes during lectures, *Reduces* those notes within 24 hours to as few key words as possible, *Recites* by looking at the keywords and attempting to recall the lecture, *Reflects* about the main ideas and any poorly understood concepts to ask about, and *Reviews* notes periodically. This method effectively combines note taking with systematically spacing the learning and checking for comprehension.

Are Relevant Reading Materials Pre-Read Before the Lecture On the Same Material? Pre-reading greatly increases understanding of a lecture. It also is another method to space learning trials and produces much better retention. It has the added advantage of encouraging the student to focus on unfamiliar words or concepts and ask about them in class.

READING SKILLS

Does the Student Pre-Read? Pre-reading takes very little time but is one of the most important techniques to aid in understanding material. Nonfiction is pre-read by reviewing non-text cues (title, author, publication date, headings and subheadings, picture, graphs, charts), reading the introduction, preface, and conclusion, and skimming the body. Fiction is pre-read by reading the front cover, back cover, and introduction, and skimming the first 25% to determine setting, character, and plot.

When There Are Words That the Student Does Not Understand in the Reading Does the Student Determine Their Meaning and Write Them Down? SSCD (Devine, 1987) provides four approaches to unfamiliar words: *Sound* (students sound out the word to see if it is already in their listening vocabulary), *Structure* (analyze the word for familiar prefixes, suffixes, and roots), *Context* (guess at the meaning using clues in the surrounding passages), and *Dictionary* (use the dictionary or glossary to look up unfamiliar words).

Is the Student Easily Distracted Or Bored While Reading? If a student is easily bored or distracted, then it can be helpful to determine how long the student can concentrate and have him or her take a brief break every so often. Taking notes, outlining, mapping, and writing down questions while reading also aid attention. Other techniques include relating something already known to the topic being read, predicting what will come next, visualizing the material (making a mental movie), and making timelines or flowcharts to track events while reading.

Are Personal Copies of Textbooks Available to the Student? Does the Student Know How to Take Notes in Textbooks by Highlighting or Making Margin Notations? Personal copies of textbooks enable students to use them more effectively. Writing margin notes in reaction to the text is more effective than highlighting because it is more active. When highlighting or underlining is used, only one or two topic sentences per paragraph should be highlighted.

Is a Reading Technique Used When Reading Difficult Assignments? There are four techniques to increase the reading comprehension of difficult materials: paraphrasing, self-questioning, visual imaging, and summarizing (Gajria & Salvia, 1992). One of the best known strategies, SQ3R (Robinson, 1961), involves the following steps:

1. Survey: Look over the material before beginning to read to obtain a general framework in which to store supporting details. Pay particular attention to the title, chapter headings and subheadings, charts and pictures, the introductory paragraphs, and the conclusion.

2. Question: Write down questions about the material before beginning to read. These questions should reflect curiosity about the topic. Another source of questions is to convert headings and subheadings into questions.

3. Read: Read through the material in the normal way. Add unknown words to a list.

4. Recite and write: Give the answers to the questions to another person or write them down. Summarize the material in writing.

5. Review: Go over the material several times before being tested, attending particularly to the author's purpose and key points, until the information is well known.

Does the Student Outline or Take Notes From Reading Assignments? Taking notes from reading or computer-generated material has been repeatedly shown to significantly increase learning, both because of the process of note taking itself and because it generates a product useful in reviewing for exams (Armel & Shrock, 1996). Outlining is one of the most effective recording techniques because it succinctly summarizes a large volume of material into a hierarchical presentation, with clear demarcation of the most important issues in headings. Outlining is frequently taught in the intermediate grades, but students' ability to outline should also be checked at the secondary level and taught and reinforced across curriculum lines. Students who are overwhelmed sometimes find the use of index cards for summary and review an effective method to handle volumes of material.

Does the Student Know How to "Map" A Reading? One method that promotes visual imaging is "mapping" readings. In so doing, the main topic is placed in the middle of a blank sheet of paper. Subheadings branch from the main topic, and supporting details branch from the subheadings. This creates a highly effective visual aid that increases organization and comprehension (Sebranek, Meyer, & Kemper, 1998).

Does the Student Know How to Summarize Effectively? Another strategy, summarizing written material, has been found to significantly increase the comprehension of written material (Gajria & Salvia, 1992). Effective summarizing requires selecting or inventing a topic sentence for each paragraph, determining which material is unnecessary and deleting it, and substituting superordinate terms for lists. Computers can be used to assist with these strategies. Most word processing programs have an outline function that can be used to facilitate outlining texts, serving as powerful tools to improve comprehension of textbook materials (Anderson-Inman, Knox-Quinn, & Horney, 1996). Further, some computer-based mapping programs are able to convert outlines into graphics and vice versa, enabling students to synthesize scientific concepts and information. Learning-disabled students provided with laptop computers can minimize the negative aspects of their learning disability and enhance their sense of self-efficacy and responsibility of academic success. Anderson-Inman, Knox-Quinn, and Horney (1996) indicate that this requires specifically teaching the students a three step process:

1. Create a chapter skeleton by typing headings and subheadings into an outlining program

2. Carefully read each paragraph and insert key words and main ideas into the outline

3. Test their knowledge by expanding and contracting the outline to show or hide material and then asking "how many?" "what are they?" or "what more do I know?" (p. 470).

Does the Student Use Headings and Other Typographical Aids? Can the Student Read Tables,

Charts, and Graphs? Does The Student Know How to Use the Table Of Contents and Index of a Book? These skills are surprisingly often not present: in one study, only 2 of 133 sixth-grade students who were experiencing school difficulty were able to use an index, a biographical dictionary, read graphs, read maps and map keys, use headings, and outline a chapter (Leland-Jones, 1997). These abilities can be checked by having the student show the school psychologist the textbook, read some of the graphs and charts, and find items using the table of contents and index.

Is the Student Able to Comprehend Textbooks? Several methods may determine a student's ability to comprehend the assigned textbook. First, it is very useful to have the student review the textbook orally, explaining the pictures, graphs, and general material in a previously studied chapter. Second, have the student read aloud a passage from the text. In instructional material, the student should be able to read with 90% word-calling accuracy and 75% accuracy in answering comprehension questions. If more challenging material, on which the child makes more than 15% word-calling errors, is assigned, additional instructional support is needed (Scott, Wolking, Stoutimore, & Harris, 1990).

A second method to assess a student's ability to comprehend content material is to devise a cloze test. This is done by photocopying approximately 260 running words from the text. The first sentence is left complete, and then one of the first five words in the second sentence is blanked out, as is every fifth word until there are fifty blanks. Finish with a complete sentence. The student then reads the passage, guessing the missing words. The student should be able to guess at least 60% of the missing words (Jacobson, 1990).

A third method is to determine the readability level of the textbook and compare this score with the score obtained on a standardized reading test. Publishers often calculate readability through one of the several indices, and readability levels can also be calculated by typing a passage into a word processing program and having the computer calculate the readability with the grammar checker.

Several strategies can be used when a student is found to be unable to comprehend a text: audio taping the textbook, using high-interest low-vocabulary materials, teaching textbook structure, pre-teaching, providing advance organizers (which might include the teacher's notes), and teaching textbook reading strategies (Meese, 1992; Devine, 1987). A number of computer programs have been developed that specifically increase reading comprehension, improve reading vocabulary, and increase reading speed. Many of these can be tailored to particular curriculum areas, for example, social studies vocabulary can be inserted (Vockell, 1992).

Computer-assisted instruction materials have been developed by a number of textbook authors, and these can be extremely useful to increase comprehension. Computer-assisted instruction uses a computer program, often on a CD-ROM or in "interactive video disc instruction," to guide and individualize instruction. These strategies have been found to greatly increase knowledge of social studies (Higgins & Boone, 1990), algebra (Kime & Clark, 1998), word recognition and decoding (Wise & Olson, 1994), and biology (Jones, 1993).

Can the Student Predict Outcomes, Distinguish Fact From Opinion, Discern Emotional Appeals, Recognize Bias, and Discern Inference? If not, then the student will find it difficult to understand reading material at the secondary level. These critical thinking skills typically are taught in the intermediate grades, but most students will require additional instruction throughout their schooling.

MATH AND SCIENCE SKILLS

Strategies necessary for the acquisition of math and science skills and knowledge are somewhat different from the strategies necessary for courses requiring substantial reading and writing such as English and History. However, these study strategies are so rarely taught that 50% of college-level math and engineering majors fail exams and courses, and an even greater number of students avoid math and science courses altogether. Fortunately, math and science study skills are quite teachable and, when incorporated into the curriculum, can improve the exam-passing rate significantly (Boelkins & Pfaff, 1998). Similar results have been found with students at the community college level, where study skills instruction resulted in approximately 20% more of the students passing math courses (Seon & King, 1997).

Does the Student Work on Math and Science Problems on a Daily Basis? Math and science skills are substantially improved by spaced learning. Studying and completing math and science problems daily is vastly superior to cramming before tests. Studying one hour daily results in significantly higher grades than studying eight hours the day before a test.

Does the Student Employ an Outline or Use 3 X 5 Flash Cards to Help Learn and Remember Definitions, Important Ideas, Key Examples, and Theorems? When teachers require these as specific assignments, they are much more likely to be completed. These should be developed well in advance of tests, several times per week, and reviewed several times. Students can develop their own flash cards, although they should be edited for accuracy. Students can also be encouraged to understand that moving from calculation to rote recall to instantaneous recall is desirable, not in an end of itself, but to facilitate problem solving in the future.

Does the Student Know How to Use a Scientific Calculator? A Graphing Calculator? Calculators are an essential component in many high school math classes and are now an integral element in the calculation of complex problems currently presented.

Does the Student Estimate the Answer in Conjunction With Using a Calculator? If students use calculators blindly, without making estimates, then they easily miss correcting minor errors that result in nonsensical answers.

Does the Student Review Problems Already Completed? Does the Student Try New Problems That Were Not Assigned? Students make much more effective progress when encouraged to be cognizant of their skill levels and to differentiate routine, review, and challenging problems (akin to reading at the independent, instructional, and frustration level). Teachers can encourage this practice by daily assigning routine problems from the current lesson, harder problems from recent lessons, and some review problems. Such assignments give the students explicit guidance in working with easier problems first, obtaining corrective feedback, and asking questions before progressing to harder problems (Boelkins & Pfaff, 1998).

Does the Student Choose Problems From a Variety of Sections to Test Understanding? Working on only one type of problem at a time can result in the rote application of procedures. In contrast, working on a mixture of problems enables students to move toward learning to apply ideas in varied contexts. It also promotes retention and helps prepare for tests.

Does the Student Participate In a Study Group? Often working toward comprehension in math and science requires students to work collaboratively, discussing and correcting each other's understanding of concepts and procedures (Derek Bok Center for Teaching and Learning, 1993). Such collaborative learning can take place in the classroom or after school in study groups. Study groups who work together, on a nightly basis, until every member of the group not only completes the homework correctly but also *understands* the concepts and process, raise grades for all participants (Treisman, 1992).

REPORTING SKILLS

Does the Student Know How to Find Information Using Books, Maps, Graphics, Newspapers, Dictionaries, Libraries, the Internet, and Other Reference Tools? A substantial number of computer programs have been developed to facilitate information retrieval. For example, there are tools that encourage the use of libraries (both hard copy and electronic) to develop research skills. Many of these are simply electronic versions of hard copy predecessors. However, the Internet is clearly a unique tool, and students need instruction in determining the appropriateness of Internet-garnered information.

Can the Student Use the Computer Catalogue in the Library and Then Locate the Material? Can the Student Use the Periodical Index? Surprisingly large numbers of older students are not independent in using these essential resources, and even college students often require additional instruction in library research techniques.

Does the Student Organize Papers, by Outlining or Using a Story Map, Before Writing? Does the Student Write a First Draft? Does the Student Proofread for Success/Failure in Answering the Purpose of the Assignment, Legibility, Neatness, Spelling, Complete Sentences, and Punctuation Errors? Again, these skills typically are taught in the intermediate grades, but most students will require additional instruction throughout their schooling.

With Which Reporting Techniques is a Student Familiar? Most Capable? Which Does He or She Prefer? Besides the traditional oral and written reports, nonverbal reporting techniques are available. These include preparing charts and graphs, making models, drawing maps, dramatic presentation, and using pictures or photographs. The use of these techniques is not limited to the traditional subject; for example, maps can be employed in English class to indicate dialect use (Devine, 1987). Many students, particularly those with learning disabilities, prefer to use nonverbal reporting techniques, and the school psychologist can consult with the classroom teacher to help develop appropriate nonverbal reporting techniques in various content areas.

Is the Student Skilled In Using Word Processing for Assignment Completion? The use of word processing greatly facilitates legibility and efficiency. However, students must be specifically taught keyboarding and effective word processing skills (including editing, cutting and pasting, other revision mechanism, spelling and grammar checkers, and electronic dictionaries and encyclopedias). Many of these skills require specific strategies. For example, students must be taught how to determine which of the alternative suggestions generated by a spelling checker are correct (Anderson-Inman, Knox-Quinn, & Horney, 1996). Writing papers requires the ability to locate and synthesize information. Using computer outlines and word processing programs greatly facilitates this process, particularly for learning-disabled students (Anderson-Inman, Knox-Quinn, & Horney, 1996).

TEST-TAKING HABITS

Does the Student Space Learning Over Several Sessions (Versus Cramming) and Use a Study Plan? Does the Student Conduct Weekly Reviews? Studying for a test should be spread over several days and divided into several small units. Research has demonstrated that spaced practice results in more efficient learning than massed practice.

Does the Student Predict Test Questions? Having a student develop multiple choice, short answer, and essay questions while studying is a very effective study technique. In addition, many students find answering predicted test questions aloud to be particularly effective.

Does the Student Know and Use Good Test-Taking Strategies? These include coming to the exam with everything needed; reviewing the directions carefully, including any sample items; skimming through the entire test to determine its scope; setting up and keeping a schedule; reading each question carefully (on essays, responding precisely to words such as discuss, describe, illustrate, explain, evaluate; on multiple choice, being wary of words such as always, never, everyone); outlining the important points to be covered before responding to an essay question; postponing an extremely difficult question; attempting to answer every question; writing neatly; and rechecking work before handing it in (Deese & Deese, 1979).

Does The Student Study Using the SQ3R (see Reading Study Skills) or a Similar Method? Does the Student Use Study Guides While Studying? In addition to using study guides provided by teachers and in the textbook, it is helpful for the student to group information into meaningful units. "Mapping" and other visual aids are particularly helpful to this end. Study guides can be in the format of outlines or graphic organizers, but are most effective when incomplete so students can add their own elaborating and experiential information. Such active interaction with study guides results in improved performance. This practice can be facilitated by the teacher's providing incomplete notes, having students complete them, and then checking them for accuracy (Katayama, 1997).

SUMMARY

Study skills significantly affect students' school functioning and can be taught at all ages and levels of ability. Teachers often do not provide instruction in study skills because they assume that students already have mastered them. Frequently, interventions to improve organization or study skills can be implemented in prevention programs or pre-referral stages, preventing the need for more extensive assessments and interventions. School psychologists' training in human learning and memory, assessment of individual differences, the application of curriculum-based assessment, consultation, the scope and sequence of instruction, behavior management plan implementation, anxiety reduction strategies, counseling, and the provision of in-service training to teachers greatly facilitates their work in improving students' study skills. Furthermore, school psychologists can effectively influence both teachers and curriculum so that study skills are addressed across curriculum lines.

The most productive assessment method uses an ecological approach, involving classroom observations, analyses of work samples, consultations with teachers and parents, student interviews, observation of the student at work, and having him or her describe work method and study techniques. One must precisely identify areas of weakness to design effective remediation. This chapter considers the assessment and treatment of affective, metacognitive, and cognitive aspects of study skills deficiencies. Questions to supplement clinical interviews are provided, as well as a checklist of classroom characteristics facilitating good study skills. Effective remediation requires that the school psychologist, student, teacher, and parent work together closely to determine appropriate procedures, designate responsibilities, and design techniques to encourage generalization.

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This book, written for parents, is a helpful summary of methods to foster good study habits and academic motivation.

Devine, T. G., (1987). *Teaching study skills: A guide for teachers* (2nd ed.). Newton, MA: Allyn and Bacon.
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Hattie, J., Biggs, J., & Purdie, N. (1996). Effects of learning skills interventions on student learning: A meta-analysis. *Review of Educational Research, 66*, 9–136.
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This book offers parents strategies to help their children succeed in school while making homework less onerous.

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This book emphasizes the importance of developing a collaboration between parents and students in the development of good study habits.

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Best Practices in Reading, Writing, and Math Assessment-Intervention Links: A Systems Approach for Schools, Classrooms, and Individuals

Virginia Wise Berninger
University of Washington

OVERVIEW

To prepare all students to have sufficient literacy and numeracy skills for an increasingly technological society, school psychologists should focus on big problems in academic skill development and not just the little problems one student at a time (Shapiro, 2000). That is, school psychologists should facilitate organizational change, with the goal of preventing reading, writing, and math disabilities and optimizing the academic achievement of all students throughout schooling. This approach does not imply that the school psychologist has to accomplish this organizational change alone. Rather, this approach envisions that the school psychologist, as a member of a multidisciplinary team of educational professionals, works with colleagues toward achieving the goal of systems level change. However, this approach does encourage the school psychologist to be a catalyst in mobilizing the team to institute a plan for achieving organizational change that would optimize the educational achievement of all students.

A three-tier model for implementing such organizational change has been described for reading and writing (Berninger, Stage, Smith, & Hildebrand, 2001) and math (Busse, Berninger, Smith, & Hildebrand, 2001). Each of the tiers is supported by empirically based evidence from a systematic line of programmatic research over the past two decades conducted by school psychologists at the University of Washington. This line of research, funded by the National Institute of Child Health and Human Development (NICHD), is unique in that it focused on (a) linking assessment and intervention and (b) integrating code and whole language approaches in reading, and integrating basics skills and process writing approaches in writing. A second line of research, funded by the U.S. Department of Education, focused on both math talent and math disability. In the first tier, school psychologists implement school-wide screening based on empirically validated measures to identify students at-risk for reading, writing, or math problems and then design early intervention programs based on empirically validated research on how children learn reading, writing, and math. School psychologists then consult with general educators or supervise paraprofessionals or community volunteers who implement these intervention programs (cf., Vadasy, Jenkins, Antil, Wayne, & O'Connor, 1997) and then monitor student progress by using norm-referenced, criterion-referenced, and curriculum-based measures and portfolios. In the second tier, school psychologists use problem-solving collaboration for designing and evaluating pre-referral intervention for any student at any grade level who is referred to the multidisciplinary child study team. This tier has been widely discussed in the school psychology literature. In the third tier, school psychologists perform individual diagnostic assessments for those students who do not respond or respond very slowly to early or pre-referral interventions for the purposes of (a) differential diagnosis and (b) individual educational planning tailored to all the necessary components of functional reading, writing, and math systems.

Schools that have used such alternative assessment-intervention models aimed at prevention through organizational change have found that (a) the number of special educational evaluations is substantially reduced and (b) school psychologists have more time for providing psychological services other than testing (e.g., see the work of Stage and collaborators in Berninger, Stage et al. (2001) for illustration with the Washington State Student Responsive Delivery System). All three tiers require consultation skills that include both process and content expertise. Process expertise in problem-solving skills is necessary but not sufficient. Content expertise in scientific knowledge of the literacy and numeracy acquisition processes and research-supported instructional practices is also necessary. This chapter will provide resources for school psychologists who wish to acquire such content expertise in the academic domain.

Furthermore, school psychologists can contribute to organizational change in additional ways beyond how assessment-intervention services are delivered in the local school. They can also consult at the district and local school level about the latest research on empirically supported assessment and intervention practices and about appropriate ways to evaluate educational achievement. This kind of consultation includes workshops to disseminate knowledge about empirically supported assessment and intervention practices. Of all the professionals in a school, the psychologist is likely to have graduate level training in how to read research literature in the academic domain and in how to apply educational measurement and statistics to academic assessment and intervention. Considerable research on reading, writing, and math over the past two decades has advanced our understanding of how children normally acquire literacy and numeracy skills and why some children struggle to do so. For example, the U.S. Congress convened a blue ribbon panel to review the sizable body of research on reading instruction, and their conclusions are now available to school practitioners (National Institute of Child Health and Human Development, 2000). Considering the bipartisan support for the national mandate that all children should be readers by the end of third grade, school psychologists have an important role to play in disseminating this research information to their colleagues through the consultation process, which includes continuing education of colleagues.

At the same time, as part of a national educational reform movement, most states have adopted standards to raise academic achievement and developed assessment instruments to evaluate whether students are meeting these standards. Although academic excellence is a laudable goal, this standards-based, high-stakes assessment is still a work-in-progress, with many measurement issues that have not been fully resolved in all states (e.g., developmental appropriateness of some of the tasks, inter-rater reliability and test-retest reliability, and validity for performance outside the classroom). These issues may receive increased public and legal scrutiny because some states tie performance on these tests with high school graduation and teacher pay and grapple with whether to hold students with diagnosed learning disabilities to the same standards as students without disabilities. Further, state officials, politicians, and the public do not always understand the statistics underlying educational assessment. For example, a public official noted that there are as many students below the 50th percentile today as there were 10 years ago, prompting the author to realize what a valuable role the school psychologist might play in educating the public, parents, and other educational professionals about the measurement issues for a variety of modes of educational assessment (e.g., norm-referenced, criterion-referenced, curriculum-based, and portfolio-based).

To begin with, school psychologists might propose more realistic alternatives to the Lake Wobegon mentality in which every student is expected to be above average, a statistical impossibility. One alternative might be to include more emphasis on acknowledgment of human diversity in abilities and on educational planning and programming that takes this diversity into account and does not hold all students to a single standard. Another alternative might be to develop algorithms for basing educational decisions such as student graduation and teacher effectiveness on multiple sources of information: state mandated assessments, school system testing programs, individual assessments (conducted by school psychologists, speech and language specialists, or special educators), and assessments by classroom teachers (e.g., portfolios). Another alternative is to place more emphasis on evaluating on an annual basis whether *every* student is achieving more at the end of the school year than at the beginning of the year on each specific curriculum goal. In the proposed systems-based assessment-intervention approach, educators should not lose sight of normal variation among students in starting and ending points each school year and the alternative paths students follow in achieving their learning outcomes (Berninger, 1998a).

Combining the previously described three tiers of assessment-intervention with consultation at the school system and building levels on research-supported knowledge of academic functioning and measurement issues will probably have more impact than merely problem solving with one teacher at a time about a single student (cf. Shapiro, 2000). The school psychologist could have positive impact on school systems, local schools, classrooms, and individual students, but will need training to achieve this goal of organizational change in academic assessment-intervention. For example, to prepare pre-service school psychologists for this expanded role of organizational change, students in the school psychology program at the University of Washington are asked to design their own screening and early intervention program (tier 1), procedures for curriculum modification and progress monitoring within a problem-solving consultation framework (tier 2), and individual educational plans aimed at all necessary components of functional reading, writing, and math systems (tier 3). They are also asked to design workshops to update educators on recent research on academic assessment and instruction. They are also asked to apply their knowledge of educational measurement and assessment to hypothetical cases involving state standards for reading, writing, and math. They are also expected to acquire hands-on experience in academic intervention through practica (and in many cases intervention research studies) in order to be better prepared for their roles as consultants with teachers or supervisors of paraprofessionals in implementing academic interventions. Because most practicing school psychologists need continuing education for this new role, this chapter is designed to call school psychologists' attention to resources for achieving this immense goal of organizational change based on empirically supported assessment and intervention practices.

To accomplish this aim, the chapter provides four kinds of information relevant to best practices: (a) resources for readily accessing the relevant research knowledge; (b) resources for research-identified reading, writing, and math skills that should be assessed and addressed in early intervention plans, pre-referral intervention plans, and individualized educational plans; (c) resources for alternative assessment instruments and alternative instructional programs and curriculum materials for these academic skills; and (d) empirically supported general principles for assessment and intervention practices for reading, writing, and math. Given space limitations, complete information on how to implement the recommended practices cannot be provided in this chapter. However, taken together, four resources (Berninger, 1998a, 2001; Berninger, Stage et al., 2001; and Busse et al., 2001) do provide this information, especially the first resource, which is a textbook designed to integrate theory, research findings, and practice.

BASIC CONSIDERATIONS IN OBTAINING RESOURCES FOR THE RELEVANT RESEARCH KNOWLEDGE LANGUAGE

Proficient assessment and intervention plans for reading and writing require that professionals have a thorough understanding of language development. Moats (2000) offered a systematic introduction to phonetics, phonology, morphology, semantics, and syntax of English. School psychologists can use this text (which explains complex linguistic concepts clearly in an easily understandable format) for workshops that are aimed at preventing literacy problems. The information is also directly applicable to interpretation of errors students make during assessment and to generation of instructional recommendations. The exercises at the end of each chapter, which provide concrete examples for translating the linguistic concepts into educational practice, are ideally suited for use in workshops. Either the brief or the comprehensive survey of language can be given before and after a single workshop or series of workshops to assess knowledge change of participants. Both the school psychologist and the speech and language specialist might conduct such workshops. The American Association of Speech, Language, and Hearing (ASHA) recognizes that speech and language specialists need more training in language and its application to learning academic skills and has set that as a professional goal (Joint ASHA-NIH Conference, September 21–23, 2000) School psychologists who desire additional training in research-generated knowledge of aural/oral language, reading, writing, and math acquisition might take university courses for their continuing education requirements or their individualized professional development plans that some states now require.

Reading

Adams (1990) offered a comprehensive introduction to the research on beginning reading instruction, and the conclusions of this synthesis of the research literature are consistent with the conclusions of the National Reading Panel a decade later (National Institute of Child Health and Human Development, 2000). Blachman (1997) reported more recent research findings regarding assessment and instructional practices in reading that are relevant to all the assessment-intervention tiers in this chapter. Likewise, the chapters on reading in Wong (1998) provided an overview of current research on reading that is relevant to all three tiers and spans literacy in early childhood to middle childhood to adolescence. Clark and Uhry (1995) focused specifically on research on diagnosis and treatment of dyslexia, which is a reading disorder that affects word recognition and decoding. Birsh (1999) described a variety of multi-sensory and structured language methods for teaching reading and other academic skills to students with learning disabilities.

Balmuth (1992), Henry (1999), and Moats (2000, Chapter 5) are valuable resources for any professional who assesses or teaches written language skills, and these references provide a deep understanding of how English phonology is represented in English orthography. These representations depend to a large degree on whether words are immigrants to the language from the Anglo-Saxon layer, the Romance (French and Latin) layer, or the Greek layer. This information is relevant in assessing and generating instructional recommendations for the phonological decoding process, which varies somewhat across these layers of word origin. For example, the /sh/ phoneme is represented by sh in the Anglo-Saxon layer (e.g., shine) but by ti or si or ci in the Romance layer (e.g., nation, passion, ancient); the ch spelling represents the /ch/ phoneme in the Anglo Saxon layer (e.g., child) but the /k/ phoneme in Greek layer (e.g., psychology). Most words in primary grade reading material are from the Anglo-Saxon layer, whereas many words in intermediate grade reading material are from the Romance layer and many words in science and technical texts are from the Greek layer. Thus, instructional recommendations for helping students at any grade level to transition from beginning reading skills to intermediate reading skills should include instructional materials with sufficient words from the Romance and Greek layers and explicit instruction in the morphology (meaning and grammatical information signaled by word structure) related to word origin (Henry, 1990, 1999).

The *Process Assessment of the Learner (PAL) Guides for Reading and Writing Intervention* (Berninger, 1998a), which will be referred to as the *PAL Intervention Guides*, described a conceptual framework for integrating research on reading (and writing) assessment and intervention. In an approach that differs from the individual educational plans (IEPs) used in schools, this resource provides forms, which can be duplicated, to plan comprehensively for *each necessary instructional component in reading (and writing)* and for *integrating these instructional components* for individual students within and across general and special education classrooms and throughout the instructional day and week. This approach is also unique in that it allows for teacher judgment as to how each of the necessary components might be taught and lists commercially available resources from which teachers can choose for each of these necessary instructional components. Implementation of this integrated assessment-intervention approach also draws on the practical suggestions Shapiro (1996) made for multimodal assessment of reading for purposes of educational planning and progress monitoring.

Writing

Graham, Harris, MacArthur, and Schwartz (1998) compared skilled writing and the writing of students with learning disabilities, described the process approach to writing instruction that is widely used, explained the role of strategy instruction in developing self-regulated writing, and discussed research on effective ways to teach handwriting, spelling, and composition. Moats (1995) integrated what is known about normal developmental processes of spelling and spelling disability. Harris and Graham (1996) summarized effective ways of teaching students strategies for self-regulation of the writing process. The *PAL Intervention Guides* (Berninger, 1998a) reviewed assessment and intervention research for handwriting, spelling, and composition and listed commercially available resources for each of the component writing processes and related language processes. Taken together, these resources provide entry to the literature on writing disabilities, which are under-diagnosed and under-served when compared with reading disabilities.

Math

Resnick and Ford (1981) described the cognitive processes for learning and teaching math from a developmental perspective, which is important for understanding math curriculum. Geary (1993) proposed neuropsychological subtypes of math disabilities, including difficulties with semantic retrieval of math facts, application of computational algorithms, and visual-spatial understanding of the number system, which is important for differential diagnosis. Fleishner and Manheimer (1997) discussed myths and realities for teaching students with math disabilities and offered practical instructional recommendations. Busse et al. (2001) synthesized a growing research literature that shows that math disabilities may be specific to problems in automaticity or strategy use or both and introduced a conceptual model of the domain-specific and domain-general components of the functional math system. This model can be applied to both interpreting assessment results based on a variety of instruments and generating instructional interventions for the math domain for both math talent and math disabilities.

General Principles Across Reading, Writing, and Math Domains

Memory processes play important roles in learning to read, to write, and to do math. Short-term memory (STM), long-term memory (LTM), and working memory (WM) contribute differentially. Whereas STM encodes incoming information from the environment in temporary stores and LTM stores information on a more permanent basis, WM (Swanson, 1995a, 1995b) stores information from STM and LTM while processing for specific reading, writing, or math goals takes place (see Swanson, Cooney, & O'Shaughnessy, 1998). Working memory is therefore an important mechanism for integrating low-level and high-level goals in academic learning (see general principle discussed later in this section). Swanson's Mental Processing Battery (Swanson, 1995a) has measures of working memory that have been validated in the University of Washington research program for assessing reading and writing skills. Classroom and clinical performance on reading, writing, and math activities or tests should be task analyzed as to whether bottlenecks may be occurring in STM, LTM, and/or WM within or across academic domains and, if so, to generate instructional recommendations to deal with specific bottlenecks.

Executive functions for managing attention and self-regulating goal-directed behaviors also play an important role in learning all academic skills. For example, Swanson (1999) reported evidence for an executive dysfunction disability subtype in addition to the phonological core subtype of reading disability. Lyon and Krasnegor (1996) provided a comprehensive resource for research on memory and executive functions related to learning academic skills. Executive functions should be assessed because learning is as dependent on child-directed, self-regulated learning as it is on teacher-directed, other-regulated instruction. Students who have difficulty with executive functions need explicit instruction in self-regulation strategies for guiding their independent learning (e.g., Harris & Graham, 1996).

Another general principle is that assessment and intervention should address both automaticity of low-level skills *and* strategies for higher-order thinking and problem solving. Automaticity of word recognition frees limited working memory resources for resource-draining reading comprehension skills. Automaticity of handwriting and spelling skills frees limited working memory resources for the constructive processes of text generation. Automaticity of math fact retrieval and application of computational algorithms (e.g., Ackerman, Anhalt, & Dykman, 1986; Garnett & Fleischner, 1983) frees limited working memory resources for resource-draining higher-level thinking skills in math problem solving (Hiebert et al., 1996; Jordan & Montani, 1997). Thus, one instructional goal for all academic domains should be to develop automaticity of low-level skills (e.g., word recognition, spelling, and math fact retrieval and computation). At the same time, another instructional goal for all academic instruction should be facilitation of higher-level thinking skills where students construct and apply knowledge and metacognitive strategies (e.g., reading comprehension, written composition, and math problem solving).

Fuchs, Fuchs, Phillips, Hamlitt, and Karns (1995) make the important point that different teaching methods may be effective in teaching the low-level and high-level skills. Students may benefit from instructional integration of these different methods. One of the general principles supported in our programmatic research on instructional intervention in reading and writing is that teaching low-level and high-level skills *close in time* within the same lesson facilitates transfer of the low-level skills (the tools) to improved high-level skills (the goal). Much of the unfortunate bickering among educational professionals over phonics versus whole language in reading, basic skills versus the process approach in writing, and basic skills versus the problem-solving approach in math has common themes and could have been avoided if this general principle of balance between low-level and high-level skills had been more widely understood. However, balance across the school day between teaching low-level basic skills to automaticity and encouraging high-level constructivist thinking may not be sufficient for integrating low-level and high-level skills in functional reading and writing systems. How these instructional components are packaged within lessons *close in time* may also be important, especially for students who struggle in academic skill acquisition. Berninger (1998a) contains greater elaboration on these general principles, their research support, and their educational implications for assessment and intervention practices.

Alternative Assessment Instruments

Just as there is more than one way to learn a skill and to teach a skill, there is more than one reliable and valid way to assess an academic skill. Berninger (1998a, Chapter 4) described alternative instruments for tier 1 and tier 3 assessment of each of the skills in the functional reading and writing systems. Berninger, Stage et al. (2001) reviewed the various curriculum-based measures that various research groups have developed and school psychologists throughout the country are using for tier 2 assessment. These are important as fluency metrics because many students' reading and writing problems are not apparent on tests that assess only accuracy and are evident only under timed conditions (Berninger, Abbott, Billingsley, & Nagy, 2001). Busse et al. (2001, Table 1) listed alternative instruments for assessing specific math skills in the functional math system. Various chapters in Andrews, Janzen, and Saklofske (2001) are resources for additional test instruments and assessment procedures for reading, writing, and math. Multi-modal assessment with a variety of instruments and assessment procedures is desirable (Berninger, 1998a, Chapter 10). See the PAL Intervention Guides for processes and skills to assess and suggestions as to which alternative tests might be used to assess each process or skill. What is important is not that a specific test is used but rather that all the empirically supported processes and skills be assessed, using any research-validated measure, and taught, using any effective instructional method.

Accountability

Increasingly, school psychologists are being asked to play a role in demonstrating accountability in terms of student learning outcomes. Chapter 10 of the *PAL Intervention Guides* outlines how multi-modal assessment, including criterion-referenced, curriculum-based, norm-referenced, and portfolio-based approaches, can be used for this purpose. School psychologists may apply these options in varied ways that are suited to their school setting.

EMPIRICALLY SUPPORTED BEST PRACTICES IN ASSESSING AND TEACHING ACADEMIC SKILLS META-ANALYSES

Swanson, Hoskyn, and Lee (1999) conducted meta-analyses on instructional intervention research from which seven themes emerged. First, on average, the largest size effects were found for reading comprehension (.81) and vocabulary (.73), modest size effects were found for word recognition (.65) and phonics (.60), and the smallest size effects were found for spelling (.51) and handwriting (.53). Second, the most effective interventions combined direct instruction and strategy instruction components, and group plus one-to-one instruction yielded higher effect sizes than one-to-one instruction alone. Third, the combined direct instruction and strategy instruction was more effective for reading in general and reading comprehension in particular, whereas direct instruction alone was more effective for word recognition. Fourth, there was further evidence of domain-specific treatment effectiveness. Effect sizes for word recognition were higher when an instructional component involving segmentation of words was present. Effect sizes for reading comprehension were higher when teachers explicitly modeled comprehension strategies. Effect sizes for spelling were higher when lessons were sequenced and involved segmentation. Effect sizes for writing were related to orientation to task. Effect sizes for math were related to instruction in small, interacting groups. Fifth, differences between students with and without learning disabilities were smaller when treatments included strategy instruction. Sixth, intelligence scores predicted effect sizes when reading was severely disabled or in the average range but were less predictive when reading was only mildly deficient. Seventh, the effect sizes for direct instruction (.82) and for strategy instruction (.84) were comparable.

The National Reading Panel (National Institute of Child Health and Human Development, 2000) concluded on the basis of research that met rigorous criteria for quality control that essential components of reading instruction are phonological awareness, letter knowledge, word decoding, fluency, and comprehension. A full report of this panel and an accompanying video are available from the National Institute of Child Health and Human Development. School psychologists can use this material in conducting in-service workshops for other school personnel.

Meta-analyses are not available with a specific focus on only writing or math interventions for students with learning problems specific to these academic domains. However, Berninger (1998a) reviewed the results of cross-sectional studies of writing skills of 900 students in grades 1–9. Handwriting, spelling, and composition were shown to be interrelated but separable skills that need to be assessed independently but taught in a coordinated, integrated fashion to students with written expression problems. Also, Busse et al. (2001) reviewed research supporting the long-standing distinction among fact retrieval, computational algorithms, conceptual knowledge, and problem solving in the math domain, which are skills that need to be assessed and taught in a coordinated, integrated fashion to students with math problems.

Recommended Assessment and Intervention at Each of Three Tiers

Table 1 refers school psychologists to other sources that outline skills and possible assessment instruments for each of the three tiers aimed at organizational change in delivery of assessment and intervention services. These sources also contain information on related instructional interventions. In the section that follows, additional information is provided for instructional resources for each academic domain.

Table 1. Recommended assessments for reading, writing, and math at each tier

Reading		
	Tier 1	See Table 1 in Berninger, Stage et al. (2001) and Berninger (2001).
	Tier 2	See ACES (Di Perna & Elliot, 2001) and Table 6.1 in Berninger (1998a).
	Tier 3	See Table 7.1 in Berninger (1998a), Table 3 in Berninger, Stage et al. (2001), and Berninger (1998a, 2001).
Writing		
	Tier 1	See Table 2 in Berninger Stage et al. (2001).
	Tier 2	See Table 6.2 in Berninger (1998a).
	Tier 3	See Table 7.1 in Berninger (1998a), Table 3 in Berninger et al. (2001), and Berninger (2001).
Math		
	Tier 1	See Table 2 (top two rows) in Busse et al. (2001).
	Tier 2	See ACES (Di Perna &Elliott, 2001) and Table 2 (third row) in Busse et al. (2001).
	Tier 3	See Table 2 (bottom row) and Table 1 in Busse et al. (2001).

Note: Space limitations preclude reproduction of each of the tables. The tables specify both which skills to assess and which test(s) might be used for each skill (that is, both the why and how of assessment). These tables are in publications widely available to school psychologists.

Reading

TIER 1

See Table 1 for resources for tier 1 screening. Researchers have developed assessment instruments that have been validated for Tier 1 screening. These include the *Texas Primary Reading Inventory* (Texas Education Agency, 2000), the *PALS: Phonological Awareness Literacy Screening* (Invernizzi, Meier, Swank, & Juel, 2000), and the *Process Assessment of the Learner Test Battery for Reading and Writing (PAL-RW)* (Berninger, 2001). Subtests of the Third Edition of the Woodcock Psychoeducational Achievement Battery and the Second Edition of the Wechsler Individual Achievement Test (see Andrews et al., 2001) can also be used for this purpose. Likewise, research-based fluency measures such as Dynamic Indicators of Basic Early Literacy Skills (DIBELS) (e.g., Kaminsky & Good, 1998) can be used for this purpose. What is more important than which test is used is that all the processes that research has shown are the best predictors of beginning reading and writing are assessed at the developmentally appropriate time. Berninger, Stage et al. (2001) and Berninger (2001) list these at different grade levels for both reading and writing.

Several large-scale research studies have shown the importance of explicit training in phonological awareness and phonological decoding (i.e., code instruction) in early intervention to prevent reading disabilities (e.g., Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998; Torgesen et al., 1999; Vellutino, Scanlon, & Tanzman, 1998). School psychologists might provide consultation to text book adoption committees in their school districts to ensure that instructional materials are used that provide explicit code instruction to all students who for whatever reason are identified as being at-risk in reading through tier 1 screening. Children whose parents have had little formal education and provide few home literacy experiences and whose families have a positive history of reading disability are especially likely to benefit from explicit code instruction. Examples of classroom programs that provide explicit code instruction include but are not restricted to *Open Court*, *Success for All*, and *Distar*. Empirically supported early intervention program for phonological awareness and phonological decoding training that can be used in the general education program with large groups or pull-out early intervention programs for smaller groups include the following: (a) the American version of the Lundberg's Swedish program (Adams, Foorman, Lundberg, & Beeler, 1998), (b) *Ladders to Literacy* (Notari-Syverson, O'Connor, & Vadasy, 1998), (c) *Road to the Code* (Blachman, Ball, Black, & Tangel, 2000), (d) *Sound Partners* (Jenkins, Vadasy, Firebaugh, & Profilet, 2000), and (e) *Talking Letters* (Berninger, 1998b; Berninger et al., 2000). An appropriate education for any student flagged on tier 1 assessment should include one of these or a comparable empirically supported program. In addition, *Words Their Way* (Bear et al., 1996) has activities and games that reinforce explicit code instruction and encourage use of multiple strategies in word learning. Multiple strategies are important for developing executive functions for self-regulation of the process of learning to read and write words.

Not only accuracy but also rate should be assessed for single-word reading and for text reading. Curriculum-based measurement is ideally suited for assessing rate (efficiency) of component skills. Although standardized, nationally normed measures have traditionally assessed only accuracy of academic skills, recently such standardized measures have been developed for assessing rate of single-word reading, rate of oral text reading, and rate of reading comprehension (see Andrews et al., 2001). Many standardized and curriculum-based measures now contain measures of rapid automatized naming (RAN), which are excellent predictors of reading rate. The *Read Naturally Series* (Read Naturally, 1997) is a commercially available individualized program for developing oral reading fluency (and transfer to comprehension) through repeated readings and wide reading of high interest material at a student's instructional level and graphing of cold (initial) and hot (subsequent) reading rates and performance on comprehension measures. *Great Leaps Reading* (Mercer & Campbell, 1997) is another commercially available resource for developing reading fluency. Although practice in reading a wide variety of texts or the same text repeatedly may be sufficient for some students to become fluent, others may need specialized techniques for developing automatic word recognition (e.g., rate training for automaticity of alphabet principle) or training in metacognitive strategies for self-regulation (Berninger, Abbott, et al., 2001).

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A variety of informal and standardized techniques can be used to screen reading comprehension, including the cloze technique for supplying the missing word in text, question answering (multiple choice or open ended), and story retell. Early in literacy acquisition, these various measures load on the same factor in at-risk readers (Berninger et al., 2000), and any of them can be used to screen for and monitor progress in reading comprehension. However, comprehension should not only be monitored early in reading acquisition but it should also be taught explicitly, just as the code needs to be taught explicitly. The *PAL Intervention Guides* list commercially available instructional resources for reading comprehension that can be used in the general education reading program or supplementary early intervention outside the regular classroom.

Tier 1 assessment-intervention links can be effective in helping children overcome the Matthew Effect, whereby initially good readers become better readers (richer) and initially poor readers become poorer readers (poorer), as illustrated by the following example reported by Berninger (1999). In one school that adopted a systems-level intervention to improve literacy, all first and second grade classroom teachers and the special education teacher taught reading during a 2-hour language arts block at the beginning of each day. School psychology interns assessed all students at the beginning and end of the school year, and America Read tutors worked individually with students to provide additional experience in reading to an adult. During the language arts block, explicit reading instruction was provided in groups that drew from all first and second grade classrooms and were not defined by grade placement. Rather, groups were defined by instructional level as determined by informal reading inventories, which were administered at the beginning of the year and re-administered during the year if teachers suspected an individual student's instructional level had become significantly higher or lower than that of other children in the group. If appropriate, changes in group placement were made. The special education teacher taught the group of first graders who tested the lowest at the beginning of the year, but because the language arts instruction was delivered at the same time for all children and in regular classrooms (not special rooms for pull-out), these children did not perceive themselves to be receiving anything different in reading than their peers did. These children who began first grade as the lowest readers received an instructional program containing all the components recommended by the National Reading Panel (National Institute of Child Heath and Human Development, 2000): phonological awareness, explicit phonological decoding, fluency training (repeated reading of the same texts and wide reading of many different texts), and comprehension. Children also received all the necessary components of writing instruction, including handwriting automaticity training, sequenced spelling lessons, and composing activities (Berninger, 1998a, 1998b). They also received integrated listening-writing-reading activities and were encouraged to be active, reflective learners who asked questions and who derived joy from reading and writing.

The nine children who started out the lowest in reading had standard scores for age that were delayed both for their average verbal IQs and grade placement at the beginning of first grade on Woodcock Reading Mastery-Revised (WRMT-R) Word Identification (WI) (M = 83.9, SD = 11.2, 15th percentile) and Word Attack (WA) (M = 69.7, SD = 6.8, 2.5 percentile). By the end of first grade, their average standard scores for age had not only increased beyond the mean (WI, M = 107.7, SD =15.2, 70th percentile; WA, M = 106.3, SD =10.1, 64th percentile) but were also comparable to the average scores of all the first grade children in this school at the end of the year. This empirically supported demonstration of student learning outcome shows that a systems level intervention can be effective in overcoming the Matthew Effect.

TIER 2

See Table 1 for resources for tier 2 assessments. An integrated system for assessing students having difficulty in the general education classroom at any grade level (K–12) and for planning, implementing, and evaluating pre-referral interventions is the *Academic Competence Evaluation Scales* (ACES) (Di Perna & Elliott, 2001), which has been empirically validated. ACES assesses both academic skills and academic enablers (interpersonal skills, motivation, study skills, and engagement). Teachers rate each item on frequency of occurrence over the past month and the importance in their classroom of behaviors, skills, and activities for 11 reading/language arts items. Students with at least a fourth grade reading level also rate themselves on the same items. To foster home-school communication and collaboration, parents also rate their children. These ratings are used to identify concerns (step 1) and analyze concerns (step 2). The related *Academic Intervention Monitoring* (AIMS) (DiPerna, Elliott, & Shapiro, 2001) is a guidebook for selecting and planning (step 3) and implementing (step 4) classroom-based interventions for difficulties in academic skills and academic engagement. ACES can be re-administered to monitor and evaluate progress and demonstrate student-learning outcomes.

Curriculum-based measures are also ideally suited for progress monitoring. These are typically timed and therefore especially suited for monitoring the development of reading fluency skills (Berninger, Abbott et al., 2001). However, un-timed curriculum-based measures could also be constructed by using curriculum materials for other components of reading curriculum that the National Reading Panel found to be essential in beginning reading instruction, such as phonological awareness, phonological decoding of unknown words, sight word vocabulary, and reading comprehension. Informal reading inventories are one approach to this kind of curriculum-based assessment and can be constructed by using textbooks and other instructional materials used in the general education classroom to monitor progress. Classroom observations and teacher interview (Shapiro, 1996) are other ways to monitor student progress, as well as assess if all the necessary components of the reading curriculum (Berninger, 1998, Table 6.1) are available to the student.

TIER 3

See Table 1 for resources for step-by-step differential diagnosis for specific reading disability. Some students do not respond or respond very slowly to tier 1 or tier 2 intervention. In such cases these students should be given a comprehensive assessment for three purposes: (a) to evaluate whether they qualify for special education services, (b) to diagnose why they are struggling in reading, and (c) to plan a more intensive, integrated intervention that includes all the necessary instructional components but is individually tailored to specific areas of weakness. Many parents desire a diagnosis whether or not their child qualifies for special education, and making a diagnosis can have a beneficial effect on home-school relationships in many cases. The *PAL Intervention Guides*, which elaborate on the rationale for tier 3 assessment that goes beyond special education placement decisions, describe a model for differential diagnosis based on developmental domains and axes that are more appropriate to educational diagnoses in school settings than those used for psychiatric diagnoses in medical settings. The *PAL Intervention Guides* also include individual education planning forms for reading, organized by all the necessary components of reading instruction, which can be used in educational planning, teaching, and progress monitoring, whether or not a student qualifies for special education. The forms can be used in conjunction with the list of commercially available resources that is also organized by the necessary components of reading instruction.

Writing

TIER 1

See Table 1 for resources on which skills to include in tier 1 screening for writing. The *PAL Guides for Intervention Kit* (Berninger, 1998b) contains empirically supported handwriting lessons and instructional materials for spelling that can be used for tier 1 intervention.

TIER 2

See Table 1 for resources for assessing whether the necessary components of writing instruction are present and for generating instructional interventions. Portfolios (Valencia, 1998) are especially important in monitoring writing progress when children are given pre-referral interventions in writing.

TIER 3

See Table 1 for resources in making step-by-step differential diagnoses in specific writing disabilities. Children who do not respond or respond very slowly should be given a thorough diagnostic assessment. As with reading, the purpose of this tier 3 assessment is threefold: (a) to evaluate whether a student qualifies for special education services, (b) to pinpoint the nature of any writing disability, and (c) to plan individually tailored, but comprehensive, integrated instruction aimed at all the necessary components of a functional writing system. The *PAL Intervention Guides* include individual education planning forms for writing, which are organized according to all the necessary components of writing instruction and

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yoked to the list of commercially available resources that are also organized by these necessary components. Our experience has been that some students have both talents (e.g., composing) and disabilities (e.g., transcribing because of handwriting and/or spelling problems) in the writing domain, and educational planning needs to be directed to both their strengths and weaknesses.

Math

TIER 1

See Table 1 for resources for tier 1 screening for both math talent and math disability. Some students have talents in specific math skills while simultaneously having a disability in another math skill. When talent and/or disability is identified, school psychologists should help design intervention to nurture math talent and/or to prevent math disability.

TIER 2

See Table 1 for resources for tier 2 assessment. ACES (Di Perno & Elliott, 2001) contains eight math items. Teachers, students (with grade 4 reading ability and higher), and parents rate these items to identify students needing pre-referral intervention. AIMS (Di Perno, Elliott, & Shapiro, 2001) can be used to generate and implement math interventions. ACES can be re-administered to monitor progress and document student-learning outcome in the math domain.

TIER 3

See Table 1 for resources for comprehensive assessment of math skills. As in the other academic domains, some students will not respond or will respond very slowly to early intervention or pre-referral intervention in math. These students should be given a comprehensive diagnostic assessment to evaluate whether they may qualify for special education or gifted programming (or both), to pinpoint any areas of math talent or disability, and to plan accordingly for instructional interventions. See Busse et al. (2001) for interventions for both math precocity and math disability.

SUMMARY AND CONCLUDING REMARKS

School psychologists are encouraged to move beyond their traditional individual assessment role in serving students with academic skills problems. Instead of testing students one at a time and consulting with one teacher at a time, school psychologists should actively work, along with other professionals on the team, toward organizational change aimed at preventing academic skills problems or at least reducing their severity. In this chapter a 3-tier model is described for achieving such organizational change. In tier 1, school-wide screenings are conducted to identify students who have deficits or are at risk in reading, writing, and/or math. Early intervention programs are planned, implemented, and evaluated. In tier 2, pre-referral assessment of students' classroom functioning and of curriculum is followed by pre-referral intervention in which the regular program is modified, the students' progress is monitored, and interventions are modified if progress is not made. In tier 3, comprehensive diagnostic assessments are conducted for those students who did not respond or responded very slowly to early intervention or pre-referral intervention. The goal of tier 3 is not only to evaluate whether students qualify for special education services but also to diagnose the nature of their reading, writing, and/or math problems and to plan interventions aimed at all the necessary components of functional reading, writing, and math systems. At all tiers the assessments and interventions should be based on scientific research. School psychologists can also be catalysts for organizational change in the academic domain by conducting continuing education workshops for other professionals in their school system and local buildings, by advising the school system on curriculum issues such as text book adoptions, and by consulting on educational measurement and assessment issues.

This chapter contains many recommended resources for school psychologists to update their knowledge of academic assessment and intervention and to draw upon in practice. For school psychologists who wish to keep up with rapidly expanding research developments in the academic domain, the list of journals at the end of the chapter is representative of the journals that publish research on academic assessment and intervention, much of which does not appear in school psychology journals. To conclude, both pre-service and in-service school psychologists who participated in the intervention and assessment studies of the University of Washington Multidisciplinary Learning Disabilities Center, which included a systems-level intervention aimed at organizational change, have shared the following observation. Professional practice grounded in assessment-intervention links that results in empirically documented student learning outcomes can be more professionally rewarding than merely assessing academic functioning of one student at a time and leaving the academic intervention solely to other professionals on the team.

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These three related resources provide an integrated system for assessment (Berninger, 2001) and intervention (Berninger, 1998a, 1998b) for reading and writing that is based on research on reading and writing supported by the National Institute of Child Health and Human Development. It is not designed as a stand-alone assessment system but rather as an assessment approach to be integrated with many other nationally normed standardized tests as well as curriculum-based, criterion-based, and portfolio-based measures for purposes of preventing and treating reading and writing problems in school systems as well as in individual students. Likewise, it offers a conceptual approach, which is grounded in research on instructional intervention and assessment-intervention links, that encourages psychologists and teachers to draw on a variety of instructional methods and materials for helping students develop functional reading and writing systems.

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These two related resources provide an integrated system for assessment and intervention that is grounded in the problem-solving collaborative model of consultation and that has been empirically validated in a decade-long research program.

REPRESENTATIVE JOURNALS THAT PUBLISH EMPIRICALLY VALIDATED, ORIGINAL ASSESSMENT, AND INTERVENTION RESEARCH ON ACADEMIC SKILLS

Journal of Educational Psychology
Scientific Studies of Reading
Journal of Experimental Child Psychology
Reading Research Quarterly
Learning Disability Quarterly
Journal of Learning Disabilities
Learning Disabilities Research and Practice
Exceptional Children
Journal of School Psychology
School Psychology Quarterly

AUTHOR NOTES

Preparation of this chapter was supported by P50 33812-05 and HD 25858-10 from the National Institute of Child Health and Human Development.

55 Best Practices in the Assessment of Written Expression

Scott Baker
Eugene Research Institute and the University of Oregon
Dawn Hubbard
Northeast Kansas Education Service Center

OVERVIEW

Connelly (1983) noted that "education is inextricably linked with the capacity to produce visible language" (p. xi). What good writers do, as captured in this description by Butler, Elaschuk, and Poole (2000), indicates why writing is such an important educational goal as well as a vehicle for helping students learn and practice important learning strategies and skills:

> Effective writers are self-regulating . . . . They analyze task requirements, articulate writing goals, and then select, adapt, or even invent strategic approaches to achieve their objectives. They monitor the success of their efforts as they engage recursively in planning, text production, and editing activities. If obstacles are encountered, effective writers adaptively adjust goals . . . or writing strategies (p. 195).

Two compelling reasons justify a chapter for school psychologists devoted to the assessment of written expression. First, many students are not acquiring even rudimentary written expression skills. Second, there is a considerable body of high quality research pointing to effective writing approaches and interventions for students with written expression problems.

According to latest results of the National Assessment of Educational Progress (National Center for Education Statistics, 1998) 16% of fourth-grade students, 16% of eighth-grade students, and 22% of twelfth-grade students were not able to write at even the most basic level. Writing problems surface early and in many cases remain with students through the duration of their formal educational experiences (Isaacson, 1995). In addition, written expression in the early grades is a good predictor of overall school success, and in many cases becomes the first indication of academic difficulty noticed by teachers (Isaacson, 1995).

Along with reading problems, written expression problems constitute the greatest number of referrals to, and placements in, special and remedial education programs (Hallahan & Kauffman, 1986; Howell, Fox, & Morehead, 1993). On every conceivable measure of writing performance, students with learning disabilities, for example, write much more poorly than do students without disabilities (Englert, Raphael, Anderson, Anthony, & Stevens, 1991; Graham, Berninger, Abbott, Abbott, & Whitaker, 1997). In essence, when students with learning disabilities write, they pay little attention "to the needs of the audience, the organization of text, the development of rhetorical goals, or the constraints imposed by the topic" (Graham & Harris, 1997, p. 414).

The second reason school psychologists should have a strong understanding of issues involved in writing instruction and assessment is that over the past 15 years innovative research has developed exciting new methods for teaching students to write more effectively (Englert et al., 1991; Graham & Harris, 1989; Wong, Butler, Ficzere, & Kuperis, 1996). This research, conducted primarily by special education researchers, has explored ways to teach students how to analyze material learned in the classroom and to write both personal narratives, based on students' own interpretations of life experiences, and persuasive essays, in which students take positions on topical social and political issues. Stimulated by studies in reading comprehension, research in expressive writing has increasingly taken on a life of its own. In the past 10 years, it has surpassed reading comprehension research in breadth of coverage as well as instructional implications for improving classroom practice (Gersten & Baker, 2001).

This research has slowly begun to be translated into classroom practice. Teachers are moving away from instruction that focuses exclusively on the mechanics of writing to instruction that focuses on the range of tasks involved in the writing process (Raphael & Englert, 1990). Teaching students to be better writers is a challenging and worthwhile instructional objective. To write well requires that students have an adequate knowledge base from which to draw content ideas, the skills to organize their ideas and present them in print according to established conventions, and sufficient self-monitoring strategies to guide the recursive writing process (Gersten & Baker, 2001). School psychologists need assessment procedures that reflect the richness and complexity of the written expression process.

Several reasons for the recent emergence of high-quality research in written expression will help school psychologists understand how to approach adequately assessing written expression (Gersten & Baker, 2001). Straightforward interest in developing methods for teaching students with learning disabilities to express their own ideas was influential from the beginning. Writing is an excellent vehicle for expressing personal perspectives and opinions and serves a legitimate academic purpose. Even factual expository writing allows students to demonstrate their unique perspectives on, and understanding of, social, political, and historical issues.

A shift in thinking also helped spur the rapid growth of research in expressive writing instruction. Evidence suggested that the academic strengths of students with learning disabilities could be demonstrated and enhanced more effectively if writing instruction focused less on mechanics (e.g., legibility and punctuation) and more on content. Goldman, Hasselbring, and The Cognition and Technology Group at Vanderbilt University (1997) summarized the research by observing that, "when asked to write about complex ideas, students with learning disabilities often demonstrate conceptual performance that far exceeds what would be predicted based on their performance on lower level skills such as capitalization, punctuation and spelling" (p. 203).

Writing instruction also was viewed as a means to help students understand critical linkages between reading and writing (Englert, Raphael, & Anderson, 1992; Graves, 1978, 1983). It was demonstrated that teaching students about how texts were structured improved reading comprehension. It made sense to build on what students learned about text structure by having them work with it in their own writing assignments. Students learned that they could use the major elements of the stories they read—characters, settings, and problems, for example—in their own stories to make them more enjoyable to read, and to write.

A final reason for the increased focus on expressive writing research is more speculative than the others. It may be that written expression is somewhat easier to assess than reading comprehension (see, e.g., Kucan & Beck, 1997). Products of writing ability are easier to collect than products of reading comprehension, thus making it easier for assessment experts to work on developing tasks that not only meet traditional criteria for reliability and validity but also satisfy current conceptualizations regarding the importance of assessment authenticity. In fact, the measures used in expressive writing research have often served as models in state writing assessments.

BASIC CONSIDERATIONS

One goal of this chapter is to provide a framework for assessing written expression that is adaptable to the diverse writing expectations and formats that characterize classroom settings. In pursuit of this objective, two assumptions are made that serve to structure the assessment of written expression. First, assessment procedures should be guided by a decision-making purpose, and the data collected should reflect that purpose (Deno, 1989; Salvia & Ysseldyke, 1981; Shinn & Hubbard, 1993; Shinn, Nolet, & Knutson, 1990). In this context, the purpose and relevance of assessment data should be clear to the teachers, parents, and students who may be affected by the outcome. The second assumption is that comprehensive assessment procedures should address not only student writing performance but also the environmental variables that may be contributing to writing problems, and that serve as intervention targets.

Before addressing specific aspects of assessing written expression, sources of data and measures that are useful for those purposes, and a decision-making context in which assessment activities are embedded, we want to provide an overview of instructional conditions that have been demonstrated to lead to improved writing performance. If school psychologists have a strong understanding of which instructional factors can be expected to best lead to better writing outcomes, then their assessments will be richer, more focused, and more likely to lead to interventions that improve student writing performance.

Changes in Traditional Classroom Writing Instruction

Writing instruction in traditional classroom environments frequently focuses on student adherence to writing conventions such as spelling, punctuation, grammar, and handwriting (Englert & Mariage, 1992). In the early elementary grades, the focus tends to be on punctuation skills (Bridge & Hiebert, 1985). During later elementary grades, more attention is directed toward copying activities, improving punctuation skills, and developing proficiency in identifying parts of speech (Bridge & Heibert, 1985). At the secondary level, the focus tends to be primarily on the completion of grammar exercises (Applebee, 1991).

Research has long demonstrated that focusing on writing conventions and grammar does not result in overall improvements in students' written compositions (Englert & Mariage, 1992; Hillocks, 1984; Isaacson, 1987). Furthermore, research conducted over the past decade has provided a clear roadmap for what writing instruction should look like in classrooms across the country. Much of this research has been reviewed in a meta-analysis on writing intervention studies conducted by Gersten and Baker (2001).

Gersten and Baker (2001) (portions of the section describing the meta-analysis were adapted from Gersten and Baker (2001)) concluded that when classroom instruction includes certain innovative instructional components, rather than traditional writing instruction methods, there is considerable benefit for students with writing problems as well as students who are good writers. Studies with innovative components showed consistent increases in the quality of written products, and effect sizes were moderate to large in magnitude (the mean effect size was .81 across 13 group design studies). These components produced positive outcomes across writing genres (e.g., comparison essays versus narrative stories) and across procedures used to assess quality (e.g., global ratings of quality versus the sum of scores for individual writing traits or rubrics). Also, these components had a moderately positive impact on students' understandings of the writing process. There was some evidence that student attitudes about writing and student feelings about themselves as writers also improved.

The vast majority of writing intervention studies included components that were grouped into three main categories: (a) explicit teaching of critical steps in the writing process, (b) explicit teaching about text structures and how they can be used in compositions, and (c) providing students with ongoing feedback on the quality of their writing. It is our experience, however, that with few notable exceptions, these components are rarely implemented adequately in either general or special education classrooms, and the combination of the three, which we believe would provide the foundation for an excellent instructional program in written expression, is rarely used. Nevertheless, increasing interest in these approaches is likely as teachers and other practitioners learn more about the research base, and as more students with disabilities take state assessments, which typically include a writing component (Gersten & Baker, 2001).

Explicit Instruction in the Writing Process

Writing intervention studies that addressed the writing process used a framework that included some variation of three essential steps: planning, writing, and revising. Invariably, explicit teaching of each step was provided by the teacher through several examples, often supported by a "think sheet," a prompt card, or a mnemonic.

Teaching students to write requires showing them how to develop and organize what they want to say and guiding them in the process of getting it down on paper. The plans students develop are critically important. To help students conceive and effectively use a "plan of action," teachers, or competent peers, should verbalize the steps they take when they engage in the writing process.

It helps when plans of action are visible to students and easy for them to understand and refer to as they work. Effective plans provide students with a concrete map for engaging in the writing process, and they provide suggestions for what students should do when they feel stuck or overwhelmed. Concrete plans also provide a common language that teachers and students can use to focus and enhance the quality of dialogue they might have about writing tasks and assignments. We believe this dialogical function represents a major advance of writing instruction over traditional methods, which required students to work in relative isolation when they wrote.

Well-developed plans result in better first drafts. Revising and editing skills are also critical to the writing process. Developing methods to help students with writing difficulties refine and edit their work has proved challenging. However, a few researchers have begun to develop specific strategies that appear promising (e.g., Englert et al., 1991; Harris & Graham, 1992; MacArthur, Schwartz, & Graham, 1991; Schumaker, Nolan, & Deshler, 1985; Wong et al., 1996). The use of peer editing, for instance, is an integral and recurrent strategy in the research of Englert, Wong, and MacArthur.

In assessing the writing environment, school psychologists should document, through interviews with the teacher and through direct observation, the extent to which explicit instruction is provided for each stage of the writing process. In many classrooms, the focus will be primarily on actual composition; that is, generating a writing product that adheres to established conventions. Typically, little instruction will be directed toward how to generate and organize ideas for writing, or how to improve a written product through revision.

Englert and her colleagues (Englert & Mariage, 1992; Englert & Raphael, 1989) have documented the effectiveness of explicitly teaching the stages of the writing process. For example, Englert and Mariage taught students a mnemonic to help them learn to plan, organize, write, edit, and revise (POWER) their written products. Teachers first modeled each stage of the writing process by "thinking aloud." In modeling planning, for example, teachers used self-talk and other overt procedures to clearly identify their audience and the purpose for writing. To activate background knowledge teachers modeled brainstorming strategies to generate writing ideas, and how to organize those ideas for content inclusion during the transcribing stage. Then they worked with students to write a class paper using the POWER strategy. Over time, students assumed more and more control of the writing process. Eventually, each student was required to complete a writing project independently and demonstrate mastery of each stage of the writing process.

Explicit Instruction of Writing Genre Conventions

Different writing genres rely on specific text conventions unique to that style to establish the basic structure or framework for the composition. A persuasive essay, for example, contains a thesis and supporting arguments; that is, elements that differ considerably from those found in narrative writing. Awareness that written text involves recurring structures and patterns is an important prerequisite to mastering the writing process (Englert & Mariage, 1992). In many classrooms, students will be expected to develop writing skills to match different types of text structures. School psychologists should be familiar with the components of different text structures as they assess environmental variables that may be affecting student performance. For example, students may be expected to write proficiently by using narrative text structure as well as many types of expository text structures such as compare/contrast, description, explanation, and persuasion (Englert & Mariage, 1992).

Explicit teaching of text structures provides a useful guide for undertaking a particular writing task. Good instruction typically includes numerous explicit models and prompts. Greater levels of specificity provided by the prompts appear to be associated with better written products (Gersten & Baker, 2001).

Concrete maps and organizers make writing using text structures visible to students and help keep them focused on important genre conventions (e.g., Englert et al., 1992, 1991). Students begin to recognize the sameness, or reoccurring text patterns, which they can use to guide their "efforts to produce well-organized texts and fuel their ability to interpret, monitor, and talk about texts" (Englert & Mariage, 1991, p. 333). De La Paz and Graham (1997) showed clearly that these types of concrete structures were critical to the completeness and overall quality of expository essays produced by students with learning disabilities.

Narrative text structure is one of the earliest text structures acquired by children and contains a number of standard components (Englert & Mariage, 1992). Typical story grammar elements in narrative text include setting events, episodes, and conclusions. In some classrooms, teachers may expect students to include story grammar elements in the students' writing without providing explicit instruction on how that is done. In other classrooms, explicit instruction may occur on as many as eight or more elements (Simmons et al., 1994).

The organizational approach used to construct a narrative is not, in and of itself, what makes a story engaging. Rather, good writing involves utilizing what Englert et al. (1991) call "overlapping and recursive processes" (p. 364). These processes do not proceed in a particular order, and one process may inform another in such a way that the author returns to previous steps for update or revision on a regular basis (Gersten & Baker, 2001).

Many students become implicitly aware of story grammar elements before they begin school, primarily through story reading at home. Yet at the high school level, many low achieving students do not have a basic understanding of story grammar elements and, not surprisingly, the writing these students produce tends to be extremely poor in comparison with their classroom peers (Graves, Montague, & Wong, 1990; Meyer, Brandt, & Bluth, 1980). Recent developments in integrated curricula highlight one way to teach text structure elements in the context of written expression that may be useful in planning instructional programs (Langer & Applebee, 1987). For example, in an integrated reading and writing curriculum, students might learn about story grammar elements during reading instruction and then integrate those elements into their own written compositions (Raphael & Englert, 1990).

A study by Graham and Harris (1989) includes a number of components for planning instructional programs that meet the needs of students with poor writing skills. For example, Graham and Harris taught students a question asking strategy to improve their narrative writing. Their program began with pre-writing activities that focused on identifying and generating story grammar elements using a mnemonic for seven story grammar questions. After students were able to recite the mnemonic and discuss its meaning, they generated story grammar elements while looking at a picture. A five-step learning strategy was used to help students write stories by using the picture prompt. The teacher first demonstrated the strategy by using a "think aloud" technique. Students then practiced the five-step learning strategy as they wrote their own stories independently. In providing feedback to students, the stories were read by the teacher and students as a group, and if any of the story elements were missing, the group discussed how and where they could be added. The stories were returned to the students for revision based on teacher and student recommendations.

Guided Feedback to Promote Writing Development

The third component that emerged in the meta-analysis on effective writing was guided feedback (Gersten & Baker, 2001). Either teachers or peers provided frequent feedback to target students on the overall quality of their writing, missing elements, and strengths. When feedback was combined with instruction on the writing process or text structure, a common vocabulary was created that gave teachers and students a meaningful way to engage in dialogue, which resulted in improved written products. The prompts helped give teachers or peers concrete suggestions for providing appropriate feedback. With the benefit of such feedback, students demonstrated what Englert et al. (1991) called "reader sensitivity," and what others refer to as writing style. In other words, students began writing in a way that was not only clear and factually correct, but also engaging for readers, because the style began to take into account reader expectations and ways to keep the reader engaged.

Some of the successful approaches set up elaborate systems for peer feedback and review (Englert et al., 1991; MacArthur et al., 1991; Wong et al., 1996; Wong, Butler, Ficzere, & Kuperis, 1997). Wong et al. (1997), for example, used guided interactive dialogue between peers, first to engage target students in the process of preparing a comparison essay, and then to assist them in revising their first draft. De La Paz and Graham (1997) demonstrated the importance of interactive dialogue between the teacher and student, who together focused on key components of the writing strategies. Wong and her colleagues hypothesized that interactive dialogues, which lead students through multiple cycles of reflection, realization, and redress of problems, helped them "see" their thoughts and write from another's perspective.

In all cases, concrete organizers were used to help initiate and focus dialogue about a writing task. Wong et al. (1996) modeled procedures for students and teachers to use in providing feedback so that they would attend not only to the surface features of writing (i.e., spelling, punctuation) but also to the presentation of ideas. The central feature of guided feedback seemed to be that teachers and peers had an organizational framework and a language to use in providing feedback to target students about their attempts at organization, originality, and interpretation.

The question of whether the teacher or peers should provide feedback may be less crucial than the quality of the feedback provided. In one study by Wong et al. (1996), teacher feedback was compared specifically to peer feedback, and the result was that both sources of feedback had a strong positive affect. What appears to be most important is that elaborate and explicit systems are set up for giving feedback (Englert et al., 1991; Wong et al., 1996).

Any strong instructional program for teaching students to communicate effectively through written expression should be linked to summative and formative measures to assess student progress. Formal methods of assessing written expression will be used by school psychologists and other specialists to help determine if students have disabilities that may be interfering with progress. Teachers also need ways to assess student writing that, though not as comprehensive as those used by a school psychologist, are still capable of providing information to determine how much progress students are making, and areas that require further instruction and practice. In the next section we detail methods of assessing written expression.

BEST PRACTICES IN ASSESSING STUDENT WRITING

Assessing Written Expression Within a Decision-Making Context

Best practices in assessing student writing performance should focus on gathering meaningful data within a problem-solving framework, which drives the process that leads to sound and reasonable decisions (Tilly, this issue). In the past several years, many districts and states have moved to alternative approaches to identifying students with disabilities, and include the problem-solving process as a critical component of reform efforts (Ysseldyke & Marston, 1998). When considering best practices in the assessment of written expression, the evaluation questions embedded in the problem-solving approach should guide school psychologists' recommendations for appropriate sources of data for decision making.

Assessing Writing Within a Problem-Solving System

As depicted in Table 1, evaluating written expression requires a clear understanding of the question being asked. Within a problem-solving system, the breadth of assessment extends beyond examining discrepancies within the child (Tilly, Reschly, & Grimes, 1998; Ysseldyke & Marston, 1998) to contributing factors such as curriculum, instruction, and environmental variables (Heartland Education Agency 11, 1996). Educational decision making changes from simply verifying that a problem exists (i.e., Problem Verification) to solving problems once they have been identified (i.e., Problem Solution).

Problem solving prior to an initial evaluation requires the development of an intervention plan that has a legitimate chance of being successful. To best ensure this, a problem-solving team should be assembled that collects and analyzes information according to the student's strengths, the problematic areas in writing, possible influencing factors, and plausible interventions. A plan should be developed for monitoring the student's response to the intervention. If the student does not respond well to the intervention, then the team may move closer toward determining that the student has a disability. In this case, it is likely a referral would be made for a more formal evalua-

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Table 1. Evaluation questions during problem solving, prior to and during an initial evaluation

Educational decision being made: problem-solving efforts prior to an initial evaluation

General problem solving questions

- What are the functional strengths of the child, family, and school?
- What are the specific areas of concern in writing?
- What are contributing causes of the concern related to curriculum, instruction, environment, and the learner?
- What do we think is the most likely contributing cause, and what can be done to make things better?
- What interventions have a high probability of success and are manageable to implement?
- What supports are necessary to implement the recommendations?
- What are our expected goals for the student, and how will we know if the intervention is working?

Educational decision being made: entitlement determination

Entitlement Component 1: Evidence of resistance to reasonable general education intervention efforts.

Evaluation questions

- What appears to be effective or not effective with this student?
- What do the data tell us about where to go next?

Entitlement Component 2: Evidence of a severe discrepancy from peers' performance levels in the area(s) of concern.

Evaluation questions

- What is the magnitude of the presenting problem?
- Is the discrepancy evident across both sources and agents of information?

Entitlement Component 3: A data-based description of the resources necessary to improve and maintain the individual's rate of learning at an acceptable level.

Evaluation questions

- Given the presenting concern and response to past interventions, what needs to be done to enable the child to participate and progress in the general education curriculum?

Entitlement Component 4: Convergent evidence logically and empirically supporting the teams' decisions.

Evaluation questions

- Is this a student with a disability as defined by IDEA or § 504?
- Does this student need specially designed instruction to benefit from his/her education?

Educational decision being made: instructional planning

Additional questions

- What are the measurable annual goals for this student?
- What interventions will be initiated to enable the student to make adequate progress in writing?

tion, but the eligibility team would continue to use the problem-solving approach to make an entitlement decision.

Making formal decisions about problems in written expression requires an investigation of instruction, curriculum, environment, and learner variables that may be central to the problem (see Table 2). Assessment techniques such as record review, interviews, observations, and tests are useful in understanding those factors. With the current emphasis on the general education curriculum and functional assessments in the 1997 Individuals with Disabilities Education Act (IDEA), school psychologists are increasingly expected to access and use a variety of data sources in making decisions about students and programs.

REVIEW

Assessing written expression lends itself to record review. It is important to understand grade-level expectations within and across subject areas, and what the student's current performance is in relation to past performance. School psychologists should summarize expectations and the prerequisite skills necessary for student success. For example, Table 3 depicts a series of grade-level outcomes, which a school psychologist could use to summarize the skills of a second-grade student under three writing conditions. The first column would indicate the presence or absence of each skill when the student was dictated sentences. In the second column, these same skills would be assessed when the student wrote in response to a story starter, and in the third condition those

Table 2. Data sources to assist with problem-solving efforts

Domains	*Review*	*Interview*	*Observation*	*Test*
Instruction	• Writing requirements for class work in writing and across subjects • Feedback provided to student on class work	• Allocated time for writing (teacher-led and independent time) • Expectations of writing within and across subjects • Preferred instructional practices • Methods used to monitor progress	• Amount of instructional time in writing • Effective teaching practices (pacing, questioning, check for student understanding, motivational strategies, relevant practice, feedback) • Classroom routines and management	
Curriculum	• Grade-level outcomes • Scope and sequence of skills taught • Prerequisite skills required to complete work • Scaffolding options provided within curriculum • Amount of review afforded for each skill	• Continuity of curriculum across grade levels • Expectations of student performance on outcomes • Adequacy of materials to meet diverse learning needs	• Alignment of curriculum materials with instructional expectations	
Environment	• Appropriateness of seating for viewing instruction and for proper handwriting	• Classroom rules and routines known to student • Availability of needed materials for writing	• Student posture and pencil grip while writing • Availability of materials used during writing instruction	
Learner	• Permanent products within current grade and past grades • School records of writing performance (building/district/state tests, classroom grades, anecdotal teacher comments)	• Self-efficacy in writing • Identification of elements covered during instruction • Learning strengths in writing • Degree of understanding of writing assignments and teacher expectations • Student accountability for learning	• Academic engaged time during instruction and independent work • Student response to instructional approaches • Student learning strengths or preferences	• Present levels of performance on measures of writing (e.g., norm- and criterion-referenced tests, classroom assessments) • Rate of learning

Table 3. Example of a written expression assessment summary using grade-level outcomes

Outcome	*Dictation*	*CBM story starter*	*Class assignment*
Conventions			
Capitalization			
Names of days of week and months of year			
First letter in each line of traditional poetry			
Punctuation			
Comma to separate date and year			
Written conversation by quotation marks			
Formation			
Appropriate spacing for punctuation marks			
Appropriate spacing between words			
Prints legibly and neatly			
Maintains margins on all sides			
Writes all lower-case and capital cursive letters.			
Sentence fluency			
Uses appropriate singular or plural noun in sentence			
Writes a variety of types of paragraphs			
Word choice			
Uses pronouns as subjects			
Idea development			
Organization			
Voice			

skills would be assessed when the student wrote in response to a class assignment. This information would help determine writing strengths, specific areas of concern, and discrepancies from expected outcomes.

INTERVIEW

Using interviews as part of the assessment process has been underutilized in education decision making (Howell & Nolet, 2000). Information from interviews not only provides important data for determining what other information to collect, but interviews also provide important data not available by using the other techniques. For example, in an interview, teachers can provide information necessary to understand how they think about the planning and delivering of instruction in written expression and what their goals are after instruction. Interviewing students after writing instruction provides an opportunity to understand what the students have learned and their attitudes toward writing. An excellent interview format for students, teachers, and parents is included as part of *The Instructional Environment System, II* (Ysseldyke & Christenson, 1996).

OBSERVATION

Observations during writing instruction provide excellent information for problem-solving efforts. Observations provide information about student engagement during teacher-led instruction and independent work time, and helps generate hypotheses as to instructional and environmental factors that may be affecting learning. Methods for conducting systematic classroom observations are covered elsewhere (Hintze, this issue). Observations should be scheduled when the teacher provides explicit instruction in the writing process or how to write according to different writing genres (Gersten & Baker, 2001). This helps develop interventions that target specific aspects of teacher-led instruction. It can also help if observations are conducted following teacher interviews and immediately before student interviews, so school psychologists know what to look for and then have specific classroom content they can discuss with the student.

TESTS

Assessments of written expression have received less attention than assessments of other academic areas such as reading and math. Because there are few technically sound measures of written expression available (see Bradley-Johnson & Lesiak, 1989, for review), best practices in the assessment of written expression involves collecting multiple measures of student performance (e.g., support from direct and indirect measures) and looking for patterns of convergence among the measures. This is particularly important when making special education entitlement decisions. Many of the procedures we present are best used for identifying student strengths and weaknesses in order to plan instructional programs and monitor student progress.

Depending on the reason for data collection, student writing samples can be collected by using standardized (e.g., curriculum-based measures, published norm-referenced tests) or non-standardized procedures (e.g., portfolio samples, writing projects). When a student's writing is to be compared with the writing of grade-level peers, standardized procedures should be used. An advantage in assessing writing is that the samples can be used in making many types of decisions (decisions about individual students' progress versus decisions about writing performance when compared with peers).

Six measurable components of written expression distinguish skilled from unskilled writers and provide an organizer for a comprehensive assessment of student writing skills. These six components are (a) fluency, (b) grammar, (c) conventions, (d) content, (e) penmanship, and (f) student knowledge of the writing process (Graham, 1982; Isaacson, 1995). Students may have difficulty in one or more of these areas, and assessment procedures should reflect the classroom teacher's concerns regarding student writing problems as well as actual student performance on writing tasks. Techniques for assessing each component are presented with a brief description of the scoring procedure and its primary application in decision making.

Writing Fluency

Fluent writing is the ability to generate words, simple sentences, and compositions of gradually increasing length. Overall, the compositions of students with high incidence disabilities contain fewer words and shorter sentences than the compositions of students in general education (Deno, Mirkin, & Marston, 1980; Myklebust, 1973; Nodine, Barenbaum, & Newcomer, 1985). Fluency can be assessed by determining the number of words written in a specified time period using Curriculum-Based Measurement (CBM) procedures (see Good & Jefferson, 1998, for a summary of technical adequacy evidence; Shinn, 1989) or by summarizing the average length of the sentences written (Cartwright, 1969).

GRAMMAR

Poor grammar is the most frequent complaint teachers have about students' writing (Larsen, 1987). Appropriate grammar includes the correct use of words and combinations of words within sentences. Grammar can be assessed by examining vocabulary and sentence structure.

VOCABULARY

Appropriate and varied vocabulary is essential to good writing. Research suggests that students with high incidence disabilities use less "rich" vocabulary when they write than students without disabilities (Deno et al., 1980; Morris & Crump, 1982). Two convenient ways to assess vocabulary used in a writing sample are determining the *variety* and *maturity* of words used.

A type/token ratio can be used to examine the variety of words used in a writing sample. A higher ratio indicates that the student is using a variety of words, with few words used repeatedly. The ratio is calculated by dividing the number of different words by the total number of words. If the student's ratio is compared with other students, or to previous samples of their own writing, then Cartwright (1969) recommends using the first 50 or 100 words from each writing sample. A qualitative approach to assessing variety is to provide a holistic judgment of the student's choice of words. Skilled writers use a variety of words that convey the intended message in a precise, interesting, and natural way (for more information see Northwest Regional Educational Laboratories website at http://www.nwrel.org).

Use of mature words typically refers to words that contain seven or more letters (Howell et al., 1993). The proportion of large words is calculated by dividing the number of words containing seven or more letters by the total number of words.

SENTENCE STRUCTURE

Sentence structure can be assessed by summarizing the types of sentences students produce, including sentences that are incomplete, simple, compound, complex, run-on, and fragmented (Cartwright, 1969; Howell et al., 1993). Summarizing the types of sentences contained in a writing sample, in terms of percentages, allows for comparisons across samples of varying length. As writers mature, they increase the percentage of compound and complex sentences, and decrease the number of simple, run-on, and fragmented sentences. Bradley-Johnson and Lesiak (1989) recommend assessing the way students structure their paragraphs by attending to (a) the use of topical sentences, (b) the relation between sentences and topic, (c) the logical order of sentences within a paragraph and paragraphs within an essay, and (d) the effectiveness of transition sentences.

Conventions

Writing according to established conventions is difficult for many students with high incidence disabilities, especially in the areas of spelling, capitalization, and punctuation (MacArthur & Graham, 1987; Thomas, Englert, & Gregg, 1987). Differences between students with disabilities and their general education peers occur in words spelled correctly, and simple punctuation conventions (Deno, Martson, & Mirkin, 1982; Tindal & Parker, 1991). Mechanical errors (e.g., punctuation and capitalization) also interfere with the quality and quantity of student writing (MacArthur & Graham, 1987) and strongly influence the holistic judgments teachers make about the sample (Moran, 1982). Techniques to assess the adequacy of writing conventions include determining the (a) number of words spelled correctly, (b) proportion of errors by category, and (c) number of correct writing sequences.

WORDS SPELLED CORRECTLY

CBM procedures use the number of words spelled correctly as an index of student writing proficiency (Marston, 1989). Assessing the number and percentage of words students spell correctly in a given sample can help school psychologists understand the nature of writing problems, the severity of the discrepancy between a student and peers, the focus of interventions, and ways to monitor student progress.

PROPORTION OF ERRORS PER CATEGORY

When writing samples contain excessive mechanical errors, Howell and Nolet's (2000) summary form of 50 capitalization and punctuation conventions can be a useful way to structure interventions. Errors are tallied and transformed into a percentage of errors per 100 words. Categorizing student errors is useful in specifying specific writing concerns and designing and evaluating specific interventions.

CORRECT WRITING SEQUENCE

Determining the number of correct writing sequences is a CBM procedure that provides a quantitative index of writing that considers grammar, fluency, and conventions (Videen, Deno, & Marston, 1982). A Correct Writing Sequence is earned for each pair of adjacent words or punctuation marks that fits the context of the overall sentence. This index assists in determining specific concerns and understanding the severity of concerns during entitlement decisions. This measure is also the most technically sound of the CBM for monitoring student progress (Hubbard, 1986).

Content

Over the past 15 years there has been a sharp increase in the emphasis placed on improving the quality of student writing content. Students with high incidence disabilities tend to experience particular difficulty (a) generating original, and relevant, responses; (b) including the basic elements of a minimal story (Nodine et al., 1985); (c) writing on topic and including basic elements of appropriate text structure (Englert & Thomas, 1987); and (d) organizing text (Englert, Raphael, Fear, & Anderson, 1988; Graham & Harris, 1997). Quality of writing content can be assessed by using an analytic rating scale or ascertaining the degree to which specific text structure components are present in a given sample.

ANALYTIC RATING

Several analytic rating scales are available for assessing the content of student writing. Common across these scales is that they provide an index of writing content by comparing a student's writing to other writing samples that have been rated according to a particular content dimension. For example, the dimensions included in a scale by Tindal and Hasbrouck (1991) are story-idea, organization-cohesion, and conventions-mechanics. Each dimension is rated on a five-point scale, with precise definitions for each point provided to judge the writing samples. Information from analytic rating scales may be particularly useful for supplementing screening decisions and planning instructional programs.

TEXT STRUCTURE COMPONENTS

The degree to which students' writing adheres to specific text structure styles and conventions should be evaluated. The amount of alignment to different text structures depends on the classroom focus and content. From teacher interviews and other sources, checklists of critical elements can be developed and used to check student-writing samples. This technique is most appropriate for planning instructional programs and evaluating progress toward short-term objectives.

Penmanship

Legible handwriting is important in effective writing. In the early grades a great deal of classroom writing instruction may be on focused on legibility (Graham, 1982). Student writing can be evaluated to determine if it contains appropriate (a) spacing between letters and words, (b) letter size, (c) alignment (i.e., proportion of parts of letters in relation to the top, middle, and bottom line), (d) line quality (i.e., pressure consistency), (e) letter slant, (f) letter formation (i.e., correctly formed upper and lower case letters and discrimination when and when not to capitalize), and (g) style (i.e., cursive versus manuscript) (Howell & Nolet, 2000). Assessment results are most useful for determining specific writing concerns and for developing interventions.

Student Knowledge of the Writing Process

Because instructional approaches that stress the writing process are increasingly emphasized in general education classrooms, comprehensive writing assessments should determine student understanding of the writing process, plus critical steps and procedures. To determine if students can apply this knowledge, school psychologists should have students edit a sample of their own writing and discuss additional ways they could improve it. Other important configurations unique to individual classrooms should also be considered for assessment. For example, if the teacher has established a system where peers edit each other's writing, then a target student might be asked to describe how he or she would edit a peer's story. Information gathered from these approaches can be used primarily for planning interventions and summarizing student progress.

SUMMARY

The nature of research on effective writing instruction has changed dramatically over the last 15 years, but effective research practices have yet to be implemented on a large scale in general and special education classrooms. In assessing students' written expression, school psychologists' decision making should be guided by what effective writing environments should look like for students having difficulties learning to write effectively. Good writing instruction is characterized by explicitly teaching students the stages of the writing process. This includes teaching students how to plan what they are going to write, how to translate those plans into a coherent writing sample that follows established writing conventions, and how to improve their first drafts to make them more interesting and polished.

Students also should be explicitly taught how to write according to specific text structure styles. Writing a narrative story is very different from writing a persuasive essay. School psychologists need to know what genres students are expected to write in proficiently and what specific instructional strategies teachers are using to teach students those genres. Finally, students need lots of ongoing and specific feedback on their efforts to become better writers. Establishing a writing environment where students can present their ideas and attempts at writing, and get specific feedback, is essential in helping demystify the difficult and frequently solitary act of composition. Effective feedback can be provided by either the teacher or peers—the main ingredient is that effective feedback includes concrete strategies for improvement.

The actual assessment of written expression involves the systematic collection of data to facilitate decision making. We have suggested that a problem-solving model should be used to contextualize and guide this process. Data sources include both environmental variables and student performance variables. Structured teacher interviews and classroom observations are two primary methods of gathering data on environmental variables. Direct measures of student writing proficiency can be used to screen students for serious writing problems that may require special education to plan instructional programs, monitor student progress, and evaluate the effectiveness of writing interventions. Many methods are available to analyze direct measures of student writing performance. The specific method or methods chosen should reflect the purpose of the assessment, classroom expectations for writing performance, and evidence of student writing problems.

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This mini-series addresses issues related to the assessment of, and interventions for, writing problems from multiple perspectives. A strong focus is placed on preventing writing problems and the use of assessment and remediation techniques that stem from a theory-driven model of writing development. Articles include a discussion of the relation between oral and written language, evidence of writing problems among middle-school students, and a multi-level diagnostic procedure to assess writing performance. In addition, two articles on interventions address the use of student self-regulated procedures to monitor writing performance and the use of word processors and integrated instructional strategies to increase student proficiency.

Bradley-Johnson, S., & Lesiak, J. L. (1989). *Problems in written expression: Assessment and remediation.* New York: Guilford.

This book examines a variety of approaches for the evaluation and remediation of writing problems. Chapter topics include (a) handwriting, (b) capitalization and punctuation, (c) spelling, (d) vocabulary and word usage, (e) sentence and paragraph structure, (f) production and quality, and (g) remediation of writing problems. While the book does not include the most up-to-date information on remediating written language problems, the authors provide useful checklists, interview formats, and considerations for assessing student-writing samples. A review of 13 norm-referenced tests and 6 criterion-referenced tests is provided in the appendix.

Englert, C., & Mariage, T. (1992). Shared understandings: Structuring the writing experience through dialogue. In D. Carnine & E. Kameenui (Eds.), *Higher order thinking* (pp. 107-137). Austin, TX: PRO-ED.

This chapter provides a good description of environmental components that are likely to lead to student success in developing writing skills. Numerous intervention ideas are imbedded throughout the chapter, related primarily to the writing process and making the components of different text structures explicit. Particular attention is paid to strategies that can be used with difficult-to-teach students and how teachers can improve the writing atmosphere in their classrooms to make writing more enjoyable and beneficial for all students.

Gersten, R., & Baker, S. (2001). Teaching expressive writing to students with learning disabilities: A meta-analysis. *The Elementary School Journal, 101*, 251–272.

This meta-analysis synthesizes research on writing interventions for students with learning disabilities and draws implications for practice. Thirteen studies implementing interventions to improve expository or narrative text were analyzed, and consistently produced strong effects in the quality of students' writing, as well as in students' sense of efficacy and understanding of the writing process. Findings suggest that three components should be part of any comprehensive instructional program. Explicit teaching of (a) the steps of the writing process and (b) the critical dimensions of different writing genres should be provided, as well as (c) structures for providing extensive feedback to students on the quality of their writing from either teachers or peers.

Howell, K. W., Fox, S. L., & Morehead, M. K. (1993). *Curriculum-based evaluation: Teaching and decision making* (2nd ed.). Pacific Grove, CA: Brooks/Cole.

The authors of this book discuss assessing student performance based on a functional teaching-oriented evaluation. Of particular interest are the chapters related to language, written expression, and written mechanics. Flowcharts are provided for each chapter to guide data collection and decision making. Each flowchart includes procedures, decisions, and teaching recommendations. This book is highly recommended for school psychologists and teachers.

Howell, K. W., & Nolet, V. (2000). *Curriculum-based evaluation: Teaching and decision making* (3rd ed.). Belmont, CA: Wadsworth/Thomson Learning.

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AUTHOR NOTE

We would like to thank Jennifer Palmer for her assistance in preparing this chapter, and the three anonymous reviewers for their helpful feedback.

56 Best Practices in Curriculum-Based Assessment

Todd A. Gravois
University of Maryland
Edward E. Gickling
Instructional Assessment Consultant
Centreville, Virginia

OVERVIEW

The relationship between quality assessment and quality instruction is the focus of this chapter. For many school psychologists the use of assessment practices to directly influence instructional design and the effective delivery of instruction remains a small part of the school psychologist's overall role. Formal assessment procedures conducted to determine the special education eligibility of students continue to dominate the majority of school psychologists' time (Curtis, Hunley, Walker, & Baker, 1999). The ability of school psychologists to provide relevant and "usable" data for the purpose of designing instruction represents a major challenge. However, it remains a challenge worth pursuing.

This challenge requires school psychologists and other service providers to increase their understanding of the characteristics of effective assessment that directly improves instruction and student performance. A critical component deserving more attention is the role assessment plays in providing data that can produce optimal learning and teaching conditions; that is, data that should be used for planning and delivering the type of effective instruction that leads to maximum student improvement.

The argument for adopting assessment practices that are directed at improving instruction is strongly supported by The National Center on English Learning and Achievement at the University of Albany, SUNY. Researchers studying the performance of first-grade students in classrooms whose teachers were identified as "effective" and "typical" found that "the most striking difference between student performance among the two groups of teachers was that the lowest achieving students in the most effective teachers' classrooms outscored their peers in the more typical classrooms to a significant degree" (National Research Center on English Learning and Achievement, 1998, p. 6). These findings fundamentally challenge the traditional view of using assessment practices simply to find deficiencies in students or to formulate comparisons among students. Instead, the needed focus of assessment should be toward assisting educators in designing and delivering effective instruction (Shepard, 2000).

Instruction is a complex variable that has a substantial influence on student learning (Bloom, 1976). As Ysseldyke and Elliott (1999) indicated, effective instruction is composed of four major components: planning, managing, delivering, and evaluating. Further, each component is supported by a set of empirical principles. While most schools and educators focus on assessment that provides information as to students' progress (i.e., evaluating instruction), there is a critical need for school psychologists to become skilled in assessment practices that support the first component (planning of instruction). A major aspect

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of planning of instruction is the decision of what to teach and how to teach it. Curriculum-based assessment (CBA) is an assessment process that supports the planning of instruction, especially in gathering useful data for determining what to teach and how to teach it. This chapter provides a context for the use of CBA by describing its basic underlying assumptions and research base. The steps for conducting a reading assessment are also described. Finally, a case study example is presented to illustrate the use of CBA.

CBA DEFINED

The model of CBA discussed here is based on the original work of Gickling and colleagues (Gickling & Havertape,1981). The use of CBA determines "the instructional needs of a student based upon the on-going performance within the existing course content in order to deliver instruction as effectively and efficiently as possible" (Gickling, Shane, & Croskery, 1989, pp. 344–345). The focus of CBA is the development of effective instructional practices that specifically connect the prior knowledge and skills of the student to the student's ability to accept new learning. While assessment practices have been traditionally used for classification, placement, and progress monitoring (see, e.g., Kamphaus, Reynolds, & Imperator-McCammon, 1999; Salvia & Ysseldyke, 1985), it is a fourth perspective, that of instructional decision making, that is the primary focus of CBA.

CBA serves two purposes within instructional decision making: (a) to create optimal learning conditions for teaching and learning and (b) to provide corrective feedback during the teaching/learning process. A primary assumption underlying CBA is that learning difficulties result from a mismatch of instruction, curriculum tasks, and the entry skills of the student (Rosenfield & Gravois, 1996). As such, the goal is to assess the student's entry skills in order to design instruction and learning tasks that move the student forward relative to his or her performance in the assigned curriculum.

These purposes and assumptions differentiate CBA from other curriculum-based techniques (Shapiro & Elliott, 1999). In particular, confusion seems to exist in school psychology between CBA and Curriculum-Based Measurement (CBM) techniques (Burns, MacQuarrie, & Campbell, 1999). This confusion, as suggested by Burns and his colleagues, may result from the fact that the two techniques differ fundamentally in their intended purpose and outcomes, but more subtly in their practical implementation. That is to say, while CBA and CBM may require students to read from curriculum material, the two processes yield data used for two very different purposes.

The use of CBM has focused primarily on measuring student's performance for determining the effectiveness of interventions or for formulating comparisons between students (Burns et. al., 1999; Tucker, 1987). CBA, on the other hand, was developed to provide assessment data that allow for the creation of optimum teaching and learning conditions in order to maximize student learning (Gickling & Havertape, 1981). Its ongoing and integrated nature within the instructional process allows for the maintenance of instructional levels and for providing immediate corrective feedback in the monitoring of student progress toward achieving specific instructional goals.

BASIC CONSIDERATIONS

CBA involves inquiring into the learning context in which the student is expected to function. This inquiry specifically seeks to answer the following five questions (Gickling, 1998):

1. What does the student know?

2. What can the student do?

3. How does the student think?

4. How does the student approach tasks that he or she is unsure of?

5. Now, what does the teacher do?

Each question is linked to a particular body of educational research that permits the CBA process to continually integrate an understanding of a student's existing skills and knowledge with the purpose of developing effective instruction. Literature relevant to CBA includes (a) the influence of prior knowledge on learning (Dochy, 1992; Wolfe & Brandt, 1998), (b) providing appropriate levels of challenge (Thomas,

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1992; Vygotsky, 1999), and (c) ensuring an instructional match (Betts, 1946; Clay, 1993). A key goal for school psychologists interested in becoming proficient in CBA is to understand the link between this literature and the assessment process.

The Importance of Prior Knowledge in the Assessment Process

Prior knowledge is central to all learning. It refers to the skills and experience that a student possesses and reflects the content skills and mental schemas that a student uses to connect new learning to existing knowledge. Wolfe and Brandt (1998) describe the brain's natural tendency to seek connections between new and known information. They suggest that when students cannot connect new information with what they already know, attention disengages and quickly fades away.

Wolfe and Brandt's (1998) discussion of prior knowledge is consistent with Bloom's (1976) concept that success in current learning is highly contingent upon a student's cumulative knowledge and experiences. These concepts are supported within the research literature as well. Dochy, Segers, and Buehl (1999) found that more than 90% of the 180 articles, books, and manuscripts they reviewed reported positive effects of prior knowledge on student performance. Their review also found that between 30 and 60% of learning variance could be explained by a student's entry skills and knowledge.

While activating prior knowledge is increasingly recognized as an important part of effective instruction, the importance of it as part of the ongoing assessment process is frequently ignored and often violated. In contrast to traditional assessment practices that demand the same performance from all students regardless of prior skills or knowledge, the correct use of CBA consciously attempts to honor and incorporate a student's prior knowledge into the assessment process.

Maintaining Appropriate Levels of Challenge

The second area for consideration is the level of challenge presented during the assessment process and the impact of various levels of challenge on students' performance. The importance of appropriate challenge is highlighted within the International Reading Association and the National Council of Teachers of English Joint Task Force's *Standards for the Assessment of Reading and Writing* (1994), which states:

> The quality of information is suspect when tasks are too difficult or too easy, when students do not understand the tasks or cannot follow the directions, or when they are too anxious to be able to do their best or even their typical work. In these situations students cannot produce their best efforts or demonstrate what they know. Requiring students to spend their time and effort on assessment tasks that do not yield high-quality, useful information results in [a] student's losing valuable learning time. Such a loss does not serve their interests and is thus an invalid practice (p. 14).

These standards, consistent with the work of Vygotsky (1999), are supported by other researchers (e.g., Tomlinson & Kalbfleisch, 1998) who have shown that students perform optimally when provided appropriate levels of challenge. The goal for school psychologists conducting CBA is to assess a student's prior knowledge and to use the resulting information to strategically manage the assessment demands at an appropriate level of challenge, one that is neither too high nor too low. To accomplish this function, there is a need for a clear concept of instructional level and a basic understanding of how information processing can adversely affect the performance of a student when the assessment is not conducted on the student's instructional level.

INSTRUCTIONAL LEVEL

Betts (1946) first introduced the concept of instructional level as related to reading performance. He noted that reading comprehension began to falter when the number of unknown words exceeded 5%. This loss of comprehension reflected a challenge level that did not promote student learning, a level he identified as frustration. He also noted when the percentage of known material remained exceptionally high (98% or better), students had no difficulty reading, a level he identified as independent. Between the independent and frustration level was the concept of instructional level—or the level where the maximum amount of teaching and learning progress could be expected.

Research originating during the teacher effectiveness period of the 1970s and early 1980s extended this concept of instructional level. This research demonstrated that teachers who managed the amount of challenge successfully during rehearsal and practice activities at a ratio of 80% known to 20% unknown were consistently able to elevate their students' performance and retention (Archer et al., 1987; Shapiro & Elliott, 1999). Table 1 provides a summary of these ratios for comprehension and rehearsal and practice tasks.

It is important to differentiate the concept of "instructional level" from "grade level," which often accompanies reading materials. In practical terms, instructional level is best understood as the relationship between the student's entry skills and knowledge and the demand of the particular reading passage or page at hand. In this sense, an appropriate level of challenge is a comfort zone created when the student has sufficient prior knowledge and skill to successfully interact with the task and still learn new information.

INFORMATION PROCESSING

A second aspect to consider in establishing an appropriate level of challenge is a student's ability to process new information. A key aspect of a student's ability to process information is the student's working memory. "Working memory is what you are paying attention to at any given point. So everything you are mulling over, making a decision about, or are learning, is at first in working memory" (Goleman cited in O'Neil, 1996, p. 8). Working memory has certain features that directly affect a student's ability to effectively and efficiently process information, features that are relevant to the discussion of instructional level. In particular, working memory requires undivided attention, has a limited capacity, and is developmental in nature. While research recognizes that the limits of working memory remain fairly individualistic, the guidelines researched by Pascuel-Leon (1970), and presented in Table 2, represent a good starting point when working with students.

As can be seen in Table 2, the capacity of working memory gradually improves with age. For example, a 3 year old can retain about one new item in working memory at a time and increasing in capacity to about seven new items (plus or minus two) for an individual 15 years old and older (Miller, 1956). However, these ranges do not imply that first graders can learn only three new items per lesson. Instead, these ranges suggest that new information be strate-

Table 1. Levels of challenge for comprehension and practice tasks

Levels of performance	*Comprehension*	*Rehearsal and practice*
Independent	98–100% known	90–100% known
Instructional	93–97% known	70–85% known
Frustrational	Below 93% known	Below 70% known

Table 2. Researched capacity of working memory by chronological age

Chronological age	*Working memory capacity (number of new items)*
3	1
5	2
7	3
9	4
11	5
13	6
15	7

Adapted from Pascuel-Leon (1970).

gically organized and presented in limited sets so as not to overload working memory.

Introducing information beyond the range of a student's working memory impacts negatively on the student's ability to retain and use new information. When overloaded, working memory loses its efficiency and generally results in fragmented learning. When not actively in use, working memory also clears itself automatically, which is why concerted steps need to be taken to keep new information in working memory (Miller, 1956; O'Neil, 1996).

The percentage values described earlier for instructional levels must be considered in relation to a student's working memory capacity if an appropriate level of challenge is to be created. For example, an instructional level in reading of 95% known words represents an appropriate level of challenge as long as the actual number of unknown words does not violate a student's working memory. That is, 95% of a 100-word passage represents 5 unknown words. This can be considered an appropriate level of challenge for an 11 year old whose working memory capacity is about five new items, but may in fact remain an inappropriate level of challenge for a 7 year old with a working memory capacity of three new items. This knowledge of the research on working memory and on instructional levels gives the school psychologist the information needed to effectively create, manage, and refine an appropriate level of challenge for students being assessed.

Ensuring an Instructional Match

The instructional match is a central concept to CBA and represents a culmination of the research on prior knowledge and on appropriate levels of challenge. As Spady (1984) noted, "excellence occurs when the instructional system is able to provide the learner with an appropriate level of challenge and a realistic opportunity for success on a frequent and continuous basis." This concept of instructional match applied to CBA requires the level of challenge (task demand) to be constantly balanced against the student's entry skills (prior knowledge and working memory capacity) for the student to demonstrate his or her best efforts.

In this sense an instructional match represents the interplay between a student's existing prior knowledge, the student's capacity for information processing, and the demands presented by the learning task. An appropriate match lets the student integrate reasonable amounts of new information successfully into existing knowledge. This type of match represents an "appropriate fit" or point where the student can comfortably engage in the assessment or learning task without being excessively challenged and frustrated. It is also the point where the assessor can truly determine what the student knows, what the student can do, how the student thinks, how the student approaches new learning tasks, and where to begin focusing instruction.

BEST PRACTICES IN CBA IN READING

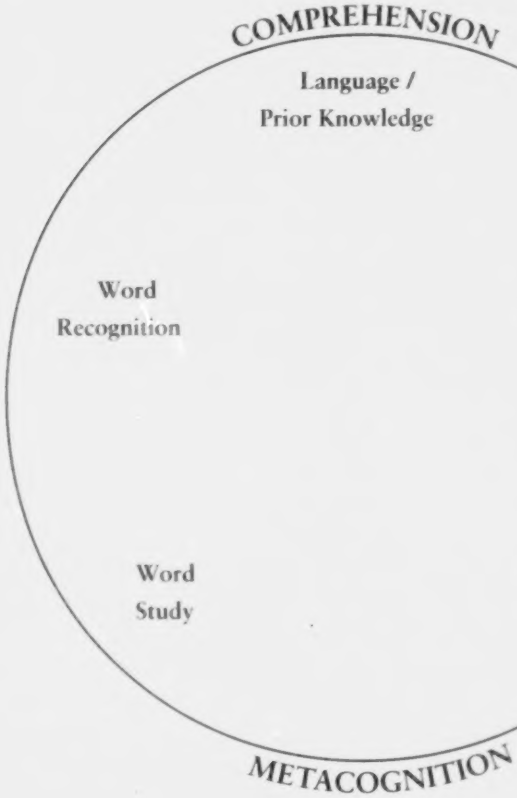
Meaningful assessments must integrate knowledge of the critical dimensions of reading with sound research practices supporting the concept of instructional match if assessments are to be useful tools in helping children become better readers. The following section introduces seven essential dimensions of reading and illustrates how these dimensions are used to guide the assessment and instructional process.

Dimensions of Reading

CBA has embraced a core of professional practices that maintains a balanced perspective to reading and the reading process. This perspective acknowledges students' reading performance as being a process of orchestrating skills and knowledge to derive meaning from the printed text. The research identifies broad key dimensions of reading that include phonemic awareness, the alphabetic principle, the development of speed and automaticity in word and text reading, and the development of comprehension strategies (Lyon cited in Mathes & Torgesen, 2000) that are interwoven and interdependent (see also Figure 1). It is recognized that both good and poor readers manage and interact with printed material by addressing these dimensions in different ways. It is the responsibility of the school psychologists conducting CBA to manage the assessment tasks and process in an effort to determine how each student orchestrates his or her reading skills within and across these different dimensions.

Comprehension and metacognitive strategies represent defining and overarching dimensions of reading. Both contribute to, and directly result from, the

Figure 1. The essential dimensions of reading assessment



effective application of the other five dimensions, displayed in Figure 1, including a student's language and conceptual understanding, word recognition, word study, reading fluency, and responding. For example, knowledge of individual words contributes to a student's overall comprehension of the reading text. Likewise, being able to attack a limited number of unknown words successfully and to read fluently positively influences the student's ability to monitor and to understand what is read.

The school psychologist's actions are directed at exploring a student's skills and knowledge in each of these dimensions. A positive answer to dimension specific questions (see Table 3) is contingent upon the student's being able to function at his or her comfort zone or instructional level during the assessment process itself. Table 3 provides a working definition for each of the seven reading dimensions and a summary of questions to be answered for each dimension as part of the CBA process.

While the school psychologist may not be able to answer every question during an initial assessment, the data collected should provide an effective starting point for working with the student and/or provide direction for additional assessment activities. Our view is that CBA is an ongoing process and other relevant data will constantly be forthcoming.

Steps in the CBA Process in Reading

CBA should be thought of as a process, and not as a singular event, and that it often results in information received in one aspect of the assessment process assisting and directing the assessment process in other aspects. The steps associated with CBA are designed to achieve a specific outcome. That outcome is to

Table 3. Reading dimensions defined and assessment questions

Essential dimensions	*Essential questions*
Language/prior knowledge The grammatical and broad range of experience that gives meaning to the student.	Does the student have adequate language, concepts, and experience to understand the text?
Word recognition The ability to identify, pronounce, and know the meaning of words that are linked together in print.	Does the student possess a sufficient sight-word pool to read and comprehend the selection?
Word study The use of organized approaches for unlocking words outside one's own sight vocabulary.	What strategies does the student use to unlock or figure out unknown words?
Fluency The speed of reading and the use of phrasing and expression during reading.	Can the student read with adequate speed and expression orally? How well does the student read silently?
Responding The ability to reply orally or in writing to what was said or read.	Can the student retell or write about what was read accurately and effectively?
Comprehension The ability to confirm, predict, and reflect on, and retain the author's message.	Does the student grasp the meaning of what the author was conveying?
Metacognition The ability to monitor and to regulate one's own learning.	Does the student use specific strategies for monitoring his or her own learning?

explore the student's orchestration of the seven reading dimensions and to answer the key questions related to what a student knows and can do for the purpose of designing effective instructional conditions for learning. However, to achieve this outcome the assessor must manage the assessment tasks and conditions so that the student is engaged in tasks under instructional level conditions *throughout* the assessment process.

The global steps involved in the CBA process include

Step 1. Selecting of materials

Step 2. Building a relationship

Step 3. Assessing the student while ensuring an instructional match

Step 4. Sampling the student's performance

Step 5. Matching results to needed instruction

Step 6. Teaching the student

These global steps are designed to develop a working relationship with the student and to gain a picture of the student's performance patterns within the constraints of tasks at the student's instructional level. Progress through the steps, though, is not necessarily linear. Instead, the assessor is confronted by decisions that must be made throughout the assessment. The following section provides a description of each step and decision questions raised throughout the reading assessment process.

STEP 1. SELECTING MATERIAL

CBA makes use of classroom and curriculum material (i.e., current reading texts, novels, basal readers, etc.) as the basis for the assessment process. In considering which specific materials to have available, the school psychologist should remain aware that the major dilemma frequently confronting teachers of a poor reader is that the student's language and conceptual skills are often *at or above* grade level while their ability actually to read is *below* expectations. This discrepancy between language and reading skills poses an equal dilemma for the assessor as to what material to use for the CBA.

Since the CBA process is designed to assess *all* of the reading dimensions, including the student's language and conceptual knowledge, the preference is to begin with grade-level reading material (i.e., material expected to be read by grade-level peers) even if the student is reading below the expected grade-level. If the student is currently reading other material, then samples of that material should also be available. Having the student's current reading material, as well as grade-level expected text, permits the assessor to have a sufficient range of material to fully capture a student's knowledge and skills across all dimensions.

STEP 2. BUILDING A RELATIONSHIP

If the school psychologist is unfamiliar with the student, then the school psychologist should take time to establish a working relationship. The school psychologist should visit with the student and put the student at ease and talk about the reason for working together. The reason is not to test the student, but to find out what the student knows and what the school psychologist can do and to help the student become a better reader. Even the reader who struggles most wants to demonstrate what he or she can do and what he or she knows. This initial conversation is also an opportunity to observe the student's language skills and concept development

STEP 3. ASSESSING THE STUDENT WHILE ENSURING AN INSTRUCTIONAL MATCH

Regardless of the stated "grade level" or difficulty of a particular text, there is considerable variability in the readability of most printed texts. Before having the student read within the selected material, the school psychologist assesses the student's current language and word recognition skills using the following two activities. These activities also assist the psychologist in determining whether the material will represent an instructional match permitting the assessment process to continue.

Reading to the Student. Assess the student's listening capacity and concept familiarity with the curriculum being taught in the classroom (i.e., grade-level material) by reading to the student and speaking with the student about what was read. After reading to the student, the student is encouraged to "talk about what was read" or "talk about what had happened so far in the material." At this point in the assessment, the assessor is observing the student's prior content knowledge, listening capacity, and oral language capacity to comprehend grade-level material.

Conducting a Word Search. By using a passage with content that appears "workable," the school psychologist begins to assess the student's word recognition skills and sight vocabulary relative to the selected text. While remaining aware of the research on instructional level and information processing, the assessor selectively points to words that the student has a high probability of knowing and points intermittently to words that appear more difficult. For most students this translates to pointing to three to four basic sight words (i.e., "it," "the," "when," "went," etc.) and then pointing to a more difficult word (e.g., a word with multiple syllables, irregular phonetic patterns) and then pointing to easier words again. The school psychologist may also engage the student in discussing the meaning of selected words as part of assessing the student's conceptual understanding of key words related to content.

The importance of maintaining high ratios of known to unknown words is the underlying reason for strategically pointing to easier and then harder words as part of the word search. This pattern of pointing to selected words is continued until the school psychologist gains a better idea of the student's working sight vocabulary. The goal is to assess the ratio of known to unknown words and then to decide whether the number of unknown words would represent a frustration level for the student or would violate the working memory capacity expected for the student's age.

The results of these first two activities, reading to the student and the strategic word search, leads to the first decision question: *Does the student possess the language and conceptual background and the word-recognition skills to comprehend the selection?* If the answer is yes, then the reading assessment can continue within the current passage. If the answer is no, then the school psychologist must take additional steps to ensure an instructional match before continuing with the assessment.

While the most common option chosen by assessors for gaining an instructional match is finding lower grade-level material, CBA offers additional options. For example, if the student's background knowledge of the content or the student's sight vocabulary is only slightly limited, then the school psychologist could strategically teach the student the concepts of a few sight words needed to elevate the passage to an instructional level. The school psychologist could also review the previous or following pages to select another passage within the same work, that would meet the student's language and vocabulary needs. Still another option is to only use segments of the passage that contain vocabulary matched to the student's skill. Finally, the school psychologist could create material that would be within the student's instructional level based upon the results of the word search. That is, the school psychologist could utilize the results of the word search to create a passage related to the existing content but composed of an appropriate ratio of known and unknown words. Such assessor-created material would provide the benefit of maintaining an instructional level and also provide material that remains related to the content of the original text.

The key in all of these options is that the task demands are only relevant when considered in relation to the student's skills. As such, these options allow the school psychologist to strategically manage the tasks and establish an instructional match before continuing with the assessment process.

Sampling Content Reading. The student reads orally from the task derived from the step above. Reading can be done in familiar or unfamiliar content. The school psychologist observes the student's reading and records how the student orchestrates the additional reading dimensions of fluency, word study, and metacognitive strategies. Fluency can be represented by the rate at which the student reads (i.e. correct words per minute) (see, e.g., Deno & Mirkin, 1977; Hasbrouck & Tindal, 1992). But fluency also refers to the rhythm and phrasing used by the student. Word study refers to the strategies the student utilizes to unlock words that the student does not know by sight. The assessor analyzes the student's errors and observes to see if the student uses decoding strategies, context clues, or other means to gain understanding of particular words. Running records (see, e.g., Clay, 1993) can be used to record the student's performance in these areas.

Assessing Comprehension. Unaided questioning techniques followed by aided questioning techniques are used to assess the student's general reading comprehension. The school psychologist begins with general unaided retelling prompts (e.g., tell me about the story, tell me more, etc.) and then proceeds to more aided and directed questioning (e.g., who was in the story, what was the story about, etc.) based upon the student's responses.

The student's performance during sampled reading raises a second set of decision questions on the part of the assessor: *When reading material at an instructional level, what word-study and reading fluency patterns did the student display? How well did the student understand what he or she was reading and how much assistance was required by the student to demonstrate comprehension?*

STEP 4. MATCHING INSTRUCTION

On the basis of the CBA process conducted, the school psychologist can now address the next decision question: *What specific reading dimensions require immediate support?* The specificity of the assessment process, and the fact that the use of instructional level material helped facilitate the student's optimal performance, creates a clearer understanding of possible reading difficulties and, more important, the type of instructional strategies that can be used to support reading improvement. Our experience has consistently found that the specificity derived from the assessment process results in greater ease in matching instructional activities to the student's assessed needs.

STEP 5. TEACHING THE STUDENT

The logical conclusion to the assessment process is to implement specific reading strategies to address the assessed areas of need—while maintaining a balanced perspective with regard to the reading dimensions. The overriding goal of the assessment process, that of keeping all activities within the student's margin of challenge, now evolves into the overriding goal of the teaching process. The teacher targets the areas of need and continuously develops word identification, fluency, and comprehension skills concurrently while working with material at an appropriate instructional match. The teacher's responsibility is to review frequently, to monitor, and to record progress to ensure continued growth of the student's reading skills. This represents the final decision question faced by the assessor: *What fine tuning needs to occur to ensure ongoing reading success?*

Case Study: Cameron

A third-grade teacher identified four students who were having trouble reading. She initially thought their problems related to difficulties with letter-sound correspondence, the blending of letters, and poor word recognition. The parents of one boy, Cameron, had asked for special education testing, thinking that he might have a learning disability. The teacher did not feel her concerns for Cameron represented a suspected learning disability, and asked if CBA could be conducted and the data used to assist in making an instructional decision and addressing the parent's request.

STEP 1. SELECTING MATERIAL

Cameron brought the material his teacher was using for reading instruction to the conference room. The particular selection was a story the class had already read (i.e., familiar text). The selection was entitled "Miss Nelson is Missing!" by Harry Allard and James Marshall (1977).

STEP 2. BUILDING A RELATIONSHIP

Cameron, after becoming acquainted with the assessor, was told the purpose of the session. He was told that his teacher and others knew that he wanted to be a better reader and that all of us wanted to help him become one. He was told that it was also our (the assessor and teacher's) job to make sure he felt comfortable working with us. For now, Cameron was told the goal was to look for what he knew and what he could do. It was stressed that if he came to a word he did not know or to a concept he did not understand, he was not to worry.

STEP 3. ASSESSING THE STUDENT WHILE ENSURING AN INSTRUCTIONAL MATCH

Reading to the Student. Cameron and the assessor reviewed pictures related to the story, and then Cameron was given an opportunity to describe what he saw and what he thought the pictures represented. Cameron was then asked to listen to the following portion of the story:

> The kids in Room 207 were misbehaving again.
> Spitballs stuck to the ceiling.
> Paper planes whizzed through the air.
> They were the worst behaved class in the whole school.
> "Now settle down," said Miss Nelson in a sweet voice.
> But the class would not settle down.
> They whispered and giggled.
> They squirmed and made faces.
> They were even rude during story hour.
> And they always refused to do their lessons.
> "Something will have to be done," said Miss Nelson (pp.3–7).

When asked to retell what was read, Cameron said that the kids were misbehaving and were the worst class in school. He also gave two examples of how the children were misbehaving. When aided with prompts, Cameron could give more examples of the students' misbehavior.

Conducting a Word Search. Since letter-sound correspondence was viewed as an area of difficulty, a brief phonics assessment within the material was conducted. By using a modification of the word search procedure, the assessor pointed to individual letters within the selection and asked Cameron to identify the associated sounds. This portion of the assessment indicated that he knew his initial and final sounds but was having some difficulty with vowel patterns in words.

To gauge Cameron's working sight-word vocabulary, a word search was conducted on the next few lines of text. The underlined words were unknown.

> The next morning Miss Nelson did not come to school.
> "Wow!" yelled the kids. "Now we can really act up!"
> They began to make more spitballs and paper planes.
> "Today let's be just terrible!" they said (p.8).

Results of the word search indicated that Cameron had a good knowledge of sight-words. He possessed a fair number of small structural words (i.e., "the," "did," "not") as well as a number of common words (i.e., "paper," "today," "morning"). The breakdown seemed to occur with two and three syllable words.

The word search also indicated that Cameron's word recognition accuracy was about 88% (4 unknown, 32 known), and the passage would be below an instructional level if he were asked to read. The assessor had several options including using lower-level reading material, using another segment from within the same story, or to strategically teach Cameron in order to elevate the passage to a better instructional match.

The decision was to utilize the current passage and to do strategic teaching prior to having Cameron read. The particular structure of the four unknown words provided an opportunity to teach Cameron some word study strategies that would serve to elevate the passage to an instructional level. The assessor discussed with Cameron the relationship between consonants and vowels and the role of each in breaking bigger words into syllables. Cohen's (1998) "Spot and Dot" technique was used to demonstrate how vowels are used to identify the letter patterns that form syllables. The assessor also discussed common letter patterns, such as *be, ed, an, an,* and *er* in words, and how to look for little words in bigger words such as *it* and *ball* in *spitball.* With limited practice using the strategy with the unknown words, the assessor was ready to sample Cameron's reading within this portion of the text.

Sampling Content Reading. Cameron was instructed to read the passage orally. He was able to read the 34 words correctly (94% accuracy) in 27 seconds (approximately 75 words per minute) when provided material at his instructional level._

Since Cameron remained engaged and motivated to continue reading, the assessor allowed him to read further into the story. While the following passage was noted to be known words at a frustration level (approximately 80%) it did provide additional information regarding Cameron's reading rate and error patterns. The unknown words again were underlined.

> "Not so fast!" hissed an unpleasant voice.
> A woman in an ugly black dress stood before them.
> "I am your new teacher, Miss Viola Swamp."
> And she rapped the desk with her ruler.
> "Where is Miss Nelson?" asked the kids.
> "Never mind that!" snapped Miss Swamp.
> "Open those arithmetic books!"
> Miss Nelson's kids did as they were told (pp.8–10).

In this passage Cameron's oral reading rate without any prior vocabulary development was 36 words per minute (or about one-half the rate noted when he read at instructional level). This measure would be considered an indication of Cameron's unrehearsed or cold reading performance. An analysis of his unknown words again revealed difficulty with multi-syllabic words and, more specifically, difficulty with past tense endings (i.e., *ed*). When Cameron was allowed additional practice with using the "Spot and Dot" strategy with unknown words, followed by a re-reading of the passage, his reading rate increased to 57 words per minute.

Assessing Comprehension. The next step in the process would be to assess Cameron's reading comprehension. However, in this case the assessor chose not to proceed with that part of the assessment. This decision was guided by the results of the assessment process already conducted. First, the material selected was familiar to Cameron and may have been discussed as part of a classroom lesson. As such, it may not be an accurate measure of his reading comprehension. Second, Cameron's listening comprehension, assessed earlier by having him respond to material orally read by the assessor, was not found to be a concern. Finally, the assessor noted that Cameron's difficulty decoding multi-syllabic words could itself negatively affect his reading comprehension.

Since the goal of the assessment is to identify immediate needs in the reading dimensions, and since comprehension is directly related to a student's word recognition and word study skills, the decision was made not to move the assessment into what might be a frustrating experience. Reading comprehension could be assessed at a later point once instruction began in the target areas cited above. The decision by the assessor to postpone the assessment of comprehension represents the fluid and flexible nature of CBA and demonstrates how results from one aspect of the assessment steps guides the assessment process later.

STEP 4. MATCHING INSTRUCTION

Results of the CBA process highlighted three possible areas of immediate need in the reading dimensions: fluency, word study, and use of metacognitive strategies. Cameron's difficulty in decoding multi-syllabic words and words with past-tense endings and the lack of a strategic approach to address unknown words were seen as viable areas to address.

Three specific strategies were considered to support Cameron's progress in these areas. First, Cameron would be taught the "word search" procedure and how to use it himself as a pre-reading strategy. Increasing Cameron's skills at self-identifying words needing practice prior to reading would place him in a more strategic position to be successful. He would also be developing his own metacognitive skills in approaching reading in narrative and ultimately in content material.

Cameron's accurate use of the word search technique would support the second set of instructional strategies, which focused on the direct teaching of letter/vowel patterns by the teacher and the opportunity for additional practice of the "Spot and Dot" technique.The intervention would be to have Cameron pre-read and identify words needing practice using the word search technique. Then the teacher would strategically teach the necessary skills or reinforce particular techniques to decode patterned words.

Finally, the strategy of "chunking" or "phrasing" was to be introduced by the teacher to show Cameron how words are grouped to form discrete units of meaning. The *chunking* strategy directly teaches students to look for small phrases or chunks of words within sentences that describe a thought or convey meaning. Students are then asked to read the phrase or chunks together according to these thoughts. As an example, the underlined phrases within the following sentence would be highlighted and practiced with Cameron.

> A woman in an ugly black dress stood before them.

This strategy could also be linked to the "Spot and Dot" technique in that just as Cameron looked for clusters of letters within words he should also practice looking for clusters of words within sentences.

STEP 5. TEACHING THE STUDENT

The next step was to formulate specific progress goals for Cameron and to teach him the various strategies described above. Central to this process was the teacher's skill in creating and maintaining the opportunity for Cameron to read within a variety of instructional and independent level materials to reinforce the application of the skills being taught.

Cameron's teacher and the assessor set the following short-term goals for Cameron based upon the information derived from the assessment process:

1. When reading unfamiliar material for the first time, Cameron will consistently apply the use of the "Word Search" strategy 90% of the time.

2. When seeing unknown multi-syllabic words for the first time, Cameron will apply the use of syllabication rules (i.e., "Spot and Dot") with 95% accuracy.

3. When given instructional level material, Cameron will read at 80 words per minute.

4. When given independent level material, Cameron will read at 100 words per minute.

The last two goals related to fluency were established by utilizing the data in published research on expected fluency performance for third graders (see, e.g., Hasbrouck & Tindal, 1992). The setting of interim and long-term goals would occur after the interventions were in place and progress was monitored toward achieving the short-term goals.

FOLLOW-UP TO CAMERON

Two weeks after the CBA and after designing appropriate instruction to address the assessed needs, Cameron's teacher indicated that he was doing much better and had improved in his reading ability. After sharing Cameron's progress with his parents, the teacher and parents agreed to defer testing for special education services.

SUMMARY

The CBA process is based on established research principles of learning which aid school psychologists and educational professionals gain an accurate picture of a student's current knowledge and skills. CBA represents best practice because the use of CBA provides an assessment method that results in the implementation of sound instructional strategies that produce positive growth in student performance. Since CBA honors a student's prior knowledge and the student's capacity to interact with new information, the results also provide the necessary information to create optimal teaching and learning conditions within the classroom setting.

While the underlying principles of CBA can be applied to all curriculum content areas, this chapter highlighted its application to the area of reading. By following the basic steps of CBA, the school psychologist is able to select appropriate material, assess the student's performance within instructional level material, and identify the dimensions of reading requiring immediate support. The specificity of the results assists school psychologists, teachers, and other professionals to design, implement, and evaluate instructional strategies targeting these areas.

For school psychologists the use of CBA requires an increased understanding of the role of assessment for instructional decision making. The use of CBA requires that school psychologists be open to incorporating assessment techniques that go beyond determining deficiencies within the individual students or simply comparing performance among students. The successful integration of CBA into the school psychologists' repertoire of skills will also require the development of consultation skills that will allow the CBA process and results to be effectively and collaboratively shared with teachers.

Finally, if school psychologists will make use of CBA as a part of their professional practice and incorporate the principles of prior knowledge, the appropriate levels of challenge, and the concept of instructional match, then CBA will serve them well. They will be in a better position to meet the learning needs of students who struggle academically and to influence the instructional practices of the teachers who work with these students.

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57 Best Practices in Providing Accommodations for Assessment

Lynn S. Fuchs
Peabody College of Vanderbilt University

OVERVIEW

The purpose of this chapter is to consider issues pertaining to the participation of students with disabilities as they participate in state and school district testing programs within general education accountability frameworks. This initial overview provides an overview of the context for this movement and identifies one key issue necessary to promote meaningful participation.

Historical Context

In the United States, the practice of assessment in the public schools often mirrors national trends, values, and problems. And ironically, today's most pressing issues, at the turn of the twentieth century, echo themes important at the turn of the last century. For example, the diversity of the nation's school population is increasing again (Hodgkinson, 1995). Currently, 8.7% of Americans are foreign born, the highest percentage since before World War II. In addition, in recent decades, the population has become more diverse ethnically, with Hispanic Americans increasing by 65%, Asian Americans by 32%, African-Americans by 16%, and European-Americans by only 8%. Moreover, the proportion of school children living below the official poverty line is increasing steadily (Stallings, 1995). At the same time, however, commitment to democratic principles remains strong, just as it was in the early part of the twentieth century. This commitment is reflected in the schools' initiatives to de-track classrooms (Braddock et al., 1992), whereby students at all achievement levels within a grade are grouped for instruction, and to include students with disabilities in mainstream classrooms (Fuchs & Fuchs, 1994).

Concurrently, however, the changing economic environment of the 1990s has created demands for a more highly skilled labor pool, which can tackle increasingly complex problems and apply knowledge in flexible ways to solve novel problems. This, in turn, has led to renewed pressures from the business community for educational accountability. Today, accountability is operationalized in terms of how much and what type of knowledge students acquire as a function of schooling (McDonnell, McLaughlin, & Morison, 1997).

How are these forces reflected in the critical assessment issues of our time? Increasing complexity in our workplace has helped shape the direction of the current education reform movement, which seeks to upgrade and enrich the content of our schools' curricula. The goal is for students to learn complex skills, such as problem solving, written expression, critical thinking, and social cooperation within authentic contexts (Darling-Hammond, 1992; Mory & Salisbury, 1992).

At the federal level, four major pieces of legislation embody the goals of this standards-based reform (McDonnell et al., 1997). First, in 1994, Goals 2000 was enacted at the behest of the Clinton administration. Goals 2000 codified a set of national education goals for all students and sought to encourage states to adopt content and performance standards. Importantly, Goals 2000 was clear in stating that the term *all students* includes those with disabilities. Goals 2000 also specifically declared that state assessments should provide for the participation of all students with diverse learning needs, along with the adaptations and accommodations necessary to permit participation.

Of course, direct federal influence was limited under Goals 2000. So, the Clinton administration and congressional supporters of standards-based reform attempted to reinforce this policy by making challenging content standards a centerpiece of other federal programs. This strategy is evident in the Improving America's Schools Act, the 1994 reauthorization of the Elementary and Secondary Education Act. This piece of legislation explicitly required that, as a condition for obtaining funds under Title 1, states and local districts submit plans that (a) provide for challenging content and performance standards, (b) state assessments and yearly reports on meeting standards, and (c) provisions for teacher support and learning aligned with new curriculum standards and assessments. And, as with Goals 2000, Title I acknowledges students with disabilities and specifies that they are to be included in the teaching and assessment of state content standards. The legislation also directed all children to participate in annual assessments and that reasonable accommodations and adaptations be provided students with diverse learning needs.

The participation of students with disabilities in standard-based reform was reinforced further with the 1997 amendments to the Individuals with Disabilities Education Act (IDEA 97). IDEA 97 requires states to include all students with disabilities in their accountability programs and to provide students with disabilities the accommodations they need to do so.

How to Promote Meaningful Participation: Valid Accommodations

Prior to the passage of IDEA 97, participation rates of students with disabilities in state assessments were dismal. As recently as 1995–1996, when the first tests of some accommodations occurred, only 45–75% of students with disabilities participated in the National Assessment of Educational Progress, and states' and districts' annual testing programs continued to exclude large numbers of students with disabilities. In addition, even when students with disabilities were permitted to take high-stakes assessments, some states or districts excluded their scores from public reports (Thurlow, Scott, & Ysseldyke, 1995).

Low participation rates, along with questionable reporting practices, were disappointing. If schools are to consider the needs of students with disabilities deliberately and proactively in reform and improvement activities, then the outcomes of these students, who constitute the vast majority of the population of individuals with disabilities, must be represented in public accountability systems. Only with representation in assessment databases will schools be held accountable for the learning of students with disabilities, be encouraged to establish challenging goals for students with disabilities, and be prompted to identify more effective instructional approaches for students with disabilities. Unfortunately, before meaningful valid participation can be accomplished, a critical assessment problem must be addressed: establishing valid accommodation policies.

Accommodations are changes in standardized assessment conditions introduced to level the playing field for students with disabilities by removing the construct-irrelevant variance (or barriers to performance) created by the disability. Valid accommodation policies produce scores for students with disabilities that measure the same attributes as standard assessments measure in non-disabled individuals (McDonnell et al., 1997). On one hand, disallowing fair, valid accommodations prevents students with disabilities from demonstrating their abilities. On the other hand, overly permissive accommodation policies inflate scores and inadvertently reduce pressure on schools to increase expectations and outcomes for students with disabilities.

With the passage of IDEA 97, states were required to develop accommodation policies. As these policies have been developed, it has become clear that tremendous variability in these policies exists (Thurlow et al., 1995; Ysseldyke, Thurlow, McGrew, & Shriner, 1994). In fact, some states prohibit the very accommodations that other states recommend. Moreover, decisions for individual students with disabilities are typically formulated idiosyncratically with vague decision-making rules that often focus on superficial variables. Without well agreed upon criteria for determining whether and if so which accommodations are allowed, comparisons between schools, districts, or states with varying accommodation policies are unfair and meaningless. And, unfortunately, research on the validity of scores from accommodated assessments is limited. Most available data are restricted to college admissions and other postsecondary tests. (See below for a review of this research base.) Clearly, research is needed on procedures to identify fair technically sound and valid accommodations for students with disabilities.

Nevertheless, some of the stickiest questions about the meaningfulness of accommodations occur for students with learning disabilities (LD). This is unfortunate because students with LD constitute the majority of the disabled population. Questions about accommodations are particularly difficult for these students for two reasons. First, this group of learners is especially heterogeneous. It is well known that school-identified LD can be subtyped into clusters with varying underlying problems (Morris et al., 1998). This makes conceptual analysis of meaningful accommodations impossible (as it might be, for example, with students with visual disabilities). Instead, heterogeneity within the population of learners with LD dictates empirical study with a strong focus on individual differences.

The second problem raising important questions for students with LD is the nature of the cognitive problems these students experience. The most distinguishing characteristics of learning disabilities are reading and math deficits (Kavale & Reece, 1992), and most high-stakes assessments, of course, directly measure or rely heavily on those very skills. Therefore, many accommodations popular for students with LD (such as extended time, decoding questions, encoding responses) may distort the meaning and interpretation of the scores. In essence, because the disability is intertwined with the constructs being measured, allowing accommodations may effectively exempt those students with LD from demonstrating the cognitive skills the assessments are designed to index. Fortunately, methods exist to address these problems.

BASIC CONSIDERATIONS

As schools struggle to preserve the meaningfulness of test information, they must identify strategies for assigning accommodations to students and procedures for operationalizing those accommodations. To identify methods for assigning and operationalizing accommodations, a thorough understanding of test theory and measurement principles is necessary. Within school settings, the professional most capable of providing this guidance is the school psychologist. In this section, therefore, we provide an overview of the literature on test accommodations.

Strategies for Studying the Validity of Test Accommodations

Three basic strategies are available for studying the validity of testing accommodations. The first approach relies on the notion of differential effects; that is, an accommodation is valid if it boosts the scores of students with disabilities more than it benefits students without disabilities. This principle is evident in the logic behind the use of a Braille accommodation for students with visual disabilities. One can predict that Braille will make a reading test accessible for students with visual disabilities and thereby boost students' scores over what we might expect with a standard administration. By contrast, for students without disabilities, we would expect a Braille accommodation to depress scores. This illustrates the principle of differential boost. In a similar way, research that employs a differential effects approach demonstrates the validity of accommodations when an accommodation boosts scores for students with disabilities substantially more than the accommodation increases scores for non-disabled students.

A second approach to studying accommodations focuses on predictive validity, which provides information on how well a test predicts performance on some important criterion. For example, we may administer a mathematics test to predict how well individuals will fare in the future in advanced placement mathematics courses. In predictive validity studies of accommodations, therefore, we might administer the mathematics test in standard format and again with an accommodation. Then, we would compare how well scores in each test condition correspond with grades obtained in the future within advanced placement courses. A stronger relation for scores in the accommodated test administration would constitute evidence for the validity of the accommodation.

A third method for studying test accommodations involves the use of differential item functioning, which seeks to detect items that appear to be measuring differently for an identifiable subgroup of examinees. This constitutes evidence of bias when the source of differential difficulty is not relevant to the construct being measured by the test. Researchers, therefore, might apply differential item functioning on tests administered with and without accommodations for students with and without disabilities. Support for an accommodation would be provided when accommodated administrations remove sources of bias for students with disabilities, which are otherwise evident with standard administrations.

What Does the Literature Say?

It is interesting to note that the literature examining the validity of testing accommodations is limited. Most studies examine samples of convenience, which usually means post-secondary students taking the SAT or GRE. In addition, available research relies almost exclusively on the first methodological approach: differential effects. Below, we summarize some of the major findings from this literature.

EXTENDED TIME FOR READING AND MATHEMATICS ASSESSMENTS

Extended time is the most frequent accommodation used for students with LD. Unfortunately, the research base is small, with almost all studies conducted at the post-secondary level.

In *reading*, the database on extended time with post-secondary students has been conducted entirely by using the Nelson Denny Reading Test. This research provides contradictory evidence. And there are too few studies to sort out the effects of how researchers operationalized extended time. Moreover, in this literature using the Nelson Denny, sometimes students took advantage of additional time, and sometimes not. This suggests variations in the samples of students with respect to reading competence, and as documented in this literature, reading level may contribute to the effect of the extended time accommodation. In any case, it is difficult to generalize to school-age students with disabilities from studies conducted at the post-secondary level. Generalization is problematic because samples of students with disabilities participating in academic testing beyond high school may represent a self-selected group with higher overall skill levels than would be expected of the school-age population of students with disabilities. This is why research on school-age samples is critical for formulating decisions about the validity of testing accommodations for the elementary and secondary population of school-age learners.

Unfortunately, in the area of reading, only one study examined effects of extended time for school-aged children with and without disabilities; these children were in the fourth grade. Fuchs et al. (2000a) studied 400 students, who completed alternate forms of a reading assessment. Each form required students to read three passages and answer 24 multiple-choice questions (i.e., 8 questions per passage). In one administration, students had 12 minutes; in the other, 24 minutes. In addition, a subset of students completed alternate forms of the reading comprehension subtest of the Iowa Test of Basic Skills: one with standard time and one with 60 minutes. For each type of measure, test forms and order of administration were counterbalanced. So, in this study, students had extended, but not unlimited, time. On the 24-item measure, the size of the effects was nearly equivalent for 200 students with LD and 200 students without LD. Among the subsample of students (42 with LD; 29 without LD) who took the reading comprehension test of the Iowa Test of Basic Skills in standard form and with one or more accommodations including extended time, the size of effects again were fairly comparable for students with and without LD. Finally, for the smaller group of students who took the Iowa in standard and with the specific accommodation of extended time (16 students with LD and 11 students without LD), the size of effects were substantially larger for students without LD than for students with LD.

Consequently, in sum, the research based on differential boost with extended time for reading assessments with the school-age population is small. The Fuchs et al. (2000a) study indicates the need for caution about recommending the use of extended time as an accommodation for the population of students with LD when reading competence is being assessed because students with and without disabilities benefited similar amounts from extended time. This indicates that the extended time accommodation does not speak to anything essential about learning disabilities, but rather would benefit most students. Of course, this study only addressed students at the fourth grade.

In *mathematics*, research on the extended time accommodation is even more scarce than research involving reading tests. The studies are not only few, but also provide contradictory evidence. However, both studies conducted with school-age students (Fuchs, Fuchs, Eaton, Hamlett, & Karns, 2000; Munger & Loyd, 1991) indicate that extended time fails to produce differential boost for students with LD on conventional mathematics tests. It is possible, however, that differential boost is accomplished with measures of complex problem solving, which also require extended reading and writing demands (Fuchs et al., 2000b). Moreover, as with the reading studies of extended time, results suggest that extended time on mathematics tests may be related to individual students' level of mathematics competence: More competent students with LD may profit from differential time more than their less skilled peers. These findings, however, are preliminary. Additional research must be conducted before recommendations can be formulated concerning the use of extended time accommodations on mathematics or reading tests for the population of students with LD.

LISTENING ACCOMMODATIONS

Listening to text being read aloud is an accommodation that cannot preserve the construct validity of tests that measure reading competence. Consequently, we do not consider listening to, rather than reading, text as an accommodation for reading assessments. (This is the case even with reading comprehension tests; if someone else reads the text, then listening, not reading, comprehension is being assessed.) Moreover, the research base fails to consider a listening accommodation for domains other than tests of mathematics achievement. So, we review the research on listening accommodations as applied to mathematics tests, where three studies were conducted with school-age students.

In a large study with mixed results, Tindal, Glasgow, Helwig, Hollenbeck, & Heath (1998) carefully controlled opportunities for 2000 fourth-, fifth-, seventh-, and eighth-grade students in 10 states to hear text read on the North Carolina statewide assessment. Students with and without disabilities participated; those with disabilities were described only as special education. Each student took two alternate forms, each with 30 items, in standard format or with a videotaped reader. Colored highlights prompted students to identify text as it was read. In both conditions, students were permitted to use calculators, scratch pads, and rulers. Administration order was counterbalanced. Among fourth-grade students, effects were in the expected direction, with an interaction differentially favoring the benefits of video presentation among special education students. At the other three grade levels, however, no differential effect was demonstrated. At the fifth grade, effects were similar in size for special education and non-disabled students; at seventh grade, effects were smaller for special education than for non-disabled students (in the direction opposite from what was anticipated); and at the eighth grade, effects were again similar in size for special education and for non-disabled students.

Fuchs et al. (2000b) also identified mixed results, although the pattern of effects was more interpretable than in the Tindal, Glasgow, Helwig, Hollenbeck, & Heath (1998) study. Fourth graders (200 with LD and 200 without LD) took alternate forms of two types of tests in standard form and with an adult reading the text: a concepts and applications test and a mathematics problem-solving performance assessment in standard. For both types of tests, the test form and the administration order were counterbalanced. No differential effect was demonstrated as a function of students' disability status; that is, effects were of similar size of for both student types. This lack of differential effect for a conventional mathematics test echoes Tindal et al.'s findings among fifth, seventh, and eighth graders who also took a conventional concepts and applications mathematics test. By contrast, however, in the Fuchs et al. study, differential effects were documented on the problem-solving performance assessment, with larger effects for students with LD. The authors attributed this differential effect to the more extended reading demands associated with the performance assessment.

So, across Tindal, Heath, Hollenbeck, Almond, & Harniss (1998) and Fuchs et al.'s (2000b) studies, it appears that a listening accommodation on conventional mathematics tests does not promote differential benefits for students with disabilities. Nevertheless, two studies in the literature do provide contradictory evidence. Tindal, Heath, Hollenbeck, Almond, and Harniss (1998) examined a listening accommodation on a conventional mathematics test among 42 fourth-grade students in special education and 122 students in general education (no information on type of disability for the special education students was provided). Students were assigned randomly to a listening or reading condition, and a significant interaction between test condition and disability status was revealed. Effect sizes were larger for special education students and than for nondisabled students.

In another positive study, Weston (1999) administered two alternate forms of a mathematics test with calculation and word problems to 65 students with and 65 students without LD. One administration was standard, and the other provided a listening accommodation; the order of administration was counterbalanced. On calculation items as well as on word problem items, larger accommodation effects were identified for the students with LD. It is not clear why effect would accrue on calculation items where text reading is unnecessary. The author did comment that, "Much of the effect for learning disabled students occurs at lower reading levels where regular education students are not well represented in this study" (p. 9).

Across this set of four studies, it is difficult to draw conclusions about the use of reading text aloud on math tests to students with LD. On conventional mathematics tests, results are decidedly mixed: Some of the largest studies provide the basis for negative conclusions, with an absence of differential effects for having an adult read text aloud to students. On the other hand, other studies appear to document findings in which students with LD seem to profit differentially from having someone read the text surrounding mathematics items. Moreover, one study revealed that on assessments with more extended reading demands, students with LD may benefit differentially. In any case, studies are just beginning to accumulate. As with the extended time accommodations, recommendations about practice must await additional research.

OTHER ACCOMMODATIONS

A sprinkling of studies investigates other accommodations: marking answers directly on test booklets (rather than on bubble sheets); use of large print on reading tests; calculator accommodations on mathematics tests; and providing students with opportunities to read reading tests aloud (rather than silently). For each of these accommodations, only one study is relevant. So, in each case, findings are preliminary, and conclusions await further study.

One study investigated how *marking responses directly on tests*, rather than requiring students to indicate their answers on bubble sheets, affects students' scores. Tindal, Heath, Hollenbeck, Almond, & Harniss (1998) examined effects for fourth-grade special and general education students on reading and math tests. Each student took two administrations of each test; counterbalancing was employed. In reading, 130 special education students and 136 general education students participated. Regardless of disability status, students actually scored higher with the bubble sheets. Results were similar in math among 128 special education and 120 general education students, with only small effects for either type of student.

Fuchs et al. (2000a) examined the use of a *large print* accommodation among 200 fourth graders with LD and 200 fourth graders without LD on two alternate forms of a reading test, each of which required students to read three passages and answer eight questions per passage. Passages and order of administration were counterbalanced. Results failed to support the notion of differential boost: Effect sizes were similar for students with and without LD.

In the same study, Fuchs et al. (2000a) examined the utility of *having students read aloud instead of silently on reading tests*. The same 200 fourth-grade students with LD and 200 fourth-grade students without LD completed a standard administration of the reading test that required students to read three passages and answer eight questions per passage. Each student also took an alternate test form, in which students read aloud. Passages and order of administration were counterbalanced. Differential boost was demonstrated in this study; effect sizes of were larger for students with LD than for students without LD. Consequently, preliminary evidence suggests that, on average, having students with LD read aloud instead of silently may serve to level the playing field on tests that measure students' reading competence.

Fuchs et al. (2000b) investigated the use of *calculators* among fourth graders with ($n = 200$) and without ($n = 200$) LD. First, each student took two alternate forms of a math concepts and applications test, one in standard format and one with a calculator; test order and form were counterbalanced. Then, each student took a math problem-solving performance assessment, one in standard format and one with a calculator; again, test order and form were counterbalanced. On concepts and applications, the use of the calculator depressed scores for students with and without disabilities. Both types of students scored better without a calculator; the size of this effect was similar for students with and without LD. On the performance assessments, findings differed. Calculators again depressed scores for students without LD; by contrast, they increased the scores of students with LD. Of course, the effect for students with LD was negligible, and the interaction between students' disability status and administration condition only approached statistical significance.

BEST PRACTICE IN IDENTIFYING FAIR AND APPROPRIATE ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

The research base is lean and limited to one approach to the study of testing accommodation: differential effects across students with and without disabilities. Consequently, at this time, it is not possible to formulate conclusions about the validity of testing accommodations for students with disabilities. Of course, even if we could point to a well-established literature that documented differential effects for students with LD, then the research would represent average performances. And because students with LD demonstrate a variety of underlying deficits, tremendous heterogeneity exists in the population. This means that many students with LD do not conform to "average" findings in the research literature. In fact, although some accommodations may ultimately reveal differential "average" effects, some students with LD will fail to benefit from those accommodations. In the same way, although some accommodations may eventually fail to demonstrate differential "average" effects, some students with LD undoubtedly will profit from those very accommodations substantially more than non-disabled students. For this reason, individual diagnosis of appropriate accommodations is necessary for students with LD.

Consequently, over the past 4 years, we have developed and studied an assessment tool school psychologists and teachers can use to supplement informal judgments about whether an individual student with LD should be awarded a specific accommodation. We call this tool the Dynamic Assessment of Test Accommodations, or DATA. With DATA, teachers administer alternate forms of short tests under varying conditions: in math computation, standard and extended time; in math concepts and applications, standard, extended time, calculator, and an adult reading text; in math problem solving, standard, extended time, calculator, an adult reading text, and an adult writing students' nonmathematical responses on request; and in reading, standard, extended time, large print, and students reading aloud. For each student with LD, within each domain (i.e., math computation, math concepts and applications, math problem solving, and reading), the teacher calculates the size of the accommodation boost (i.e., score with the accommodation minus score in the standard format). Then, the teacher compares the individual student's boosts with normative information on non-disabled students. When a student with LD derives an accommodation boost that substantially exceeds the boost we expect for non-disabled students, DATA recommends that the IEP team consider the accommodation for classroom tests and for the statewide assessment. Research conducted with DATA is promising. Results for math and reading are similar. In this chapter, we provide an overview of the reading study (Fuchs et al., 2000a). See Fuchs et al. (2000b) for information on the math study.

Participants

Participants were 365 children. Most were in fourth grade. Approximately half of these students had no identified disability, and the other half had a LD. To each student we administered DATA in the area of reading. Therefore, brief assessments were conducted under four conditions: standard (4 minutes per passage, regular-size print, student reads silently) and extended time (8 minutes per passage), large print, and student reads aloud. With DATA, students read three passages for each of the four forms. For each passage, they answer eight multiple-choice questions: six literal questions focusing on four main ideas and two details, along with two inferential questions. On each passage, students have 2 minutes to read and 2 minutes to answer questions; with extended time, 4 minutes to read and 4 minutes to answer questions is permitted. Scores are corrected for guessing (number correct minus [number incorrect/3]) and then averaged across the three passages.

In this study, we used the scores on the four brief assessments within DATA in the following ways. First, we used the sample of students with*out* LD to estimate the "typical" boost we might expect for each accommodation from non-disabled students. Then we compared the accommodation boost of each individual student with LD to the "typical" boost to determine whether the individual demonstrated a greater-than-expected boost and therefore qualified for that accommodation on the large-scale assessment. We compared accommodation decisions based on DATA to the decisions teachers had formulated using their judgment.

Finally, to each student with LD, we administered two forms of a large-scale reading assessment (the Iowa Test of Basic Skills) under standard and accommodated conditions, with test forms and administration orders counterbalanced. We examined how well teacher and DATA decisions corresponded to the accommodation boosts students experienced on the Iowa.

How Well Do Teacher Judgments About Accommodations Correspond to the Dynamic Assessment of Test Accommodations Decisions?

We found poor correspondence between the decisions formulated by teachers and by DATA. Teachers awarded many more accommodations (73% for teachers versus 41% for DATA). Moreover, students to whom teachers had awarded accommodations failed to earn greater accommodation boosts than did students to whom teachers had denied accommodations. In fact, effect sizes were minimal. Boosts were larger for teacher denials than for teacher awards for two of the three accommodations.

This calls into question the accuracy of teacher judgments in specifying testing accommodations. Also, the accuracy of teacher judgments is especially important in light of the demographic markers and performance variables associated with teachers' decisions. Specifically, in our research, the students whom teachers had selected for accommodations had been retained in school more years, disproportionately were African-American and received reduced or free lunch, and had lower IQs and reading instructional levels. Importantly, no such differences were associated with the decisions formulated with the DATA-based method.

Did DATA Enhance Teachers' Accommodation Decisions?

So, which method for identifying accommodations better predicted the boosts students earned on the large-scale assessment? We dedicated the final phase of our study to answering this question. This final study phase was limited to students with LD, with whom we conducted two forms of a commercial test used for large-scale assessments: the Iowa Test of Basic Skills. Students completed one form in standard format. For the other form, they received the accommodation(s) specified by DATA or, if DATA had ruled out all accommodations, they received a randomly assigned accommodation.

The accommodation boosts on this commercial test revealed the potential for DATA to supplement and enhance teacher judgments. Accommodation boosts did not correspond to teachers' judgments about whether students did or did not warrant accommodations. The main effect for teacher judgment failed to achieve statistical significance. In fact, students to whom teachers had *denied* accommodations actually earned somewhat *larger* accommodation boosts than did the students to whom teachers had awarded accommodations.

By contrast, the main effect sorting students into DATA-based decisions did achieve statistical significance. Students to whom DATA had awarded accommodations earned larger boosts as a function of having those accommodations when compared to the subset to whom DATA had denied accommodations.

Consequently, teachers granted accommodations to large numbers of students with LD who failed to profit from those accommodations more than would be expected among non-disabled students. DATA was, however, helpful in sorting students into those who did and those who did not profit differentially from accommodations.

Among the students to whom teachers had awarded accommodations, accommodation boosts of students to whom DATA had awarded accommodations were 2.81 times higher than those to whom DATA had denied accommodations. This substantial benefit illustrates how DATA differentiated true from false positives. Of course, reducing false positive accommodation decisions is critical. One important goal of including students with disabilities in accountability databases is to prompt schools to use their resources to enhance outcomes for all students, including those with disabilities. If this is to occur, then test scores must provide realistic, not inflated, estimates of student capacity so that schools can use accountability databases to identify which students with disabilities require additional attention. In fact, when accommodations produce spuriously high scores, schools experience reduced pressure to intervene on behalf of students with disabilities.

In a similar way, if we take the subgroup of students to whom teachers had denied accommodations and we further divide those students into the ones to whom DATA had and had not awarded accommodations, we see a 17.52-fold increase in accommodation boost between DATA-based decisions. Therefore, DATA was useful in sorting the group of students to whom teachers had denied accommodations into two subsets: those who did and those who did not benefit differentially. The implications of denying accommodations to students, when those accommodations are warranted, are serious. Without accommodations, these students may be disallowed the opportunity to demonstrate the mathematical problem-solving competence they possess. And, when high-stakes consequences for individual students are associated with participation in accountability systems, it is essential for students to be permitted the test accommodations their disabilities warrant.

Conclusions

This study, as does a parallel investigation in math (Fuchs et al., 2000b), calls into question teacher judgment about test accommodations. Teachers' decisions do not correspond to students' actual accommodation boosts on the brief assessments or on the longer, large-scale, commercial test. Moreover, teachers' decisions appeared to be influenced by demographic and performance variables that were not associated with more objective methods for determining accommodation decisions.

These findings may not be surprising. After all, federal legislation requiring test accommodations to facilitate student participation in large-scale testing programs is new, and teachers have limited experience in formulating these decisions. They also have little conceptual background about the function of test accommodations, no formal opportunities to compare the actual effects of test accommodations for students with and without disabilities, and a scant literature base to consult as they seek information to help inform their decisions.

Although the shortcomings of teacher judgment may be understandable, findings do nevertheless provide the basis for concern. Fortunately, this study also demonstrates how objective data sources, such as DATA, can supplement teacher judgments to enhance accommodation decisions. School psychologists are the professional group in schools with the most sophisticated knowledge about measurement and assessment. This makes school psychologists the ideal person for helping teachers operationalize their state's testing accommodations and putting into place objective methods for identifying which students should be awarded test accommodation. DATA is one well-developed tool psychologists can use to formulate these decisions.

SUMMARY

Test accommodations are one critical feature for promoting the valid participation of students with disabilities within standards-based reform. Unfortunately, research provides little guidance to practitioners as they struggle to formulate decisions about which students should be permitted which test accommodations. And research suggests that teachers award too many accommodations, which fail to preserve validity. School psychologists are the professionals with the greatest expertise for guiding IEP teams toward sound decisions. The Dynamic Assessment of Test Accommodations is one well-developed tool school psychologists can use to foster objective decision making about test accommodations.

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www.nasponline.org

ISBN 0-932955-85-1

Best Practices in School Psychology

IV

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Volume 2

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58 Best Practices in Promotion of Social Competence in the Schools

Kathy McNamara
Cleveland State University

OVERVIEW

In 1986, Good and Weinstein presented a case for a comprehensive view of school effectiveness, arguing that emotional, social, and moral capacities must join intellectual capacity as proper targets for the educational mission of schools:

> School is a place where children develop or fail to develop a variety of competencies that come to define self and ability, where friendships with peers are nurtured, and where the role of community member is played out, all during a highly formative period of development. Thus, the building of self-esteem, interpersonal competence, social problem-solving skills, responsibility, and leadership becomes important both in its own right and as a critical underpinning of success in academic learning (Good & Weinstein, 1986, p. 1095).

The term "social competence promotion" (SCP) refers to institutional efforts to accomplish this mission, combining the goals of prevention and competence building with problem-focused interventions (Hoagwood & Erwin, 1997). The importance of SCP extends beyond the school years; adaptability, personal management, group effectiveness, teamwork, negotiation, and organizational effectiveness have been cited by potential employers as competencies that are at least as important as academic skills for success in the workplace (Elias et al, 1997).

The magnitude of the challenge facing SCP initiatives is reflected in the range of problems they are expected to prevent and remedy, including school safety concerns, gang membership, academic failure and school dropout, substance abuse, delinquency, youth violence and weapons possession, bullying, sexual harassment, and mean-spirited teasing (Walker et al., 1998). With increasing interest in school-based SCP programs as a response to these concerns, a window of opportunity has been opened for school psychologists to actualize their potential as mental health professionals knowledgeable about programs, interventions, and resources, and how to integrate them into the culture of schools (Nastasi, 1998).

Unfortunately, the many school-based programs and activities that comprise SCP are often provided in a piecemeal manner, with little or no organization or coordination of various program elements, and inadequate evidence of their likely or actual effectiveness. Even those programs deemed effective seldom demonstrate a meaningful impact on attitudes and behaviors identified as critical by the larger community (Masten & Coatsworth, 1998; Walker et al., 1998). Clearly, there is a need to conceptualize and plan school-based SCP programs as a coordinated system of activities where effectiveness has been validated through research and systematic evaluation. Moreover, programs should match the nature, frequency, and intensity of activities and interventions to the differing needs of students, whether on the basis of developmental considerations, student risk status, or the "severity and intractability of students' adjustment problems"

(Walker et al., 1996, p. 196). Success in building a comprehensive SCP program requires a commitment to infusing its goals and principles into the fabric of the school's organization and daily activities; that is, in other words, into the culture of the school.

The role of the school psychologist varies with each element of SCP programs, from disseminating research findings about risk factors and intervention techniques to developing and conducting screening activities. This chapter provides a conceptual framework for comprehensive school-based SCP program development, including important goals and recommended elements, and includes information about several projects whose success has been documented through research.

BASIC CONSIDERATIONS

Factors Affecting the Development of Social Competence

Research has identified three major influences on the development of social competence: *early life experiences*, *social-contextual factors*, and *school experiences*. In contrast to those who have developed adequate self-regulatory skills by the time of school entry, children who have learned maladaptive behavior patterns in their early years often bring these patterns to school in the form of aggressive and antisocial behavior (Patterson, DeBaryshe, & Ramsey, 1989). Parenting practices that have been linked to conduct problems among school-aged children include inconsistent and harsh discipline, low supervision and involvement, and inflexible rigid discipline (Conduct Problems Prevention Research Group, 1999a). "Early starters," or children exposed since infancy to ineffective parenting practices resulting from disruptive family environments or stressors, are at substantial risk for later school dropout and delinquency (Walker, Colvin, & Ramsey, 1995).

Social-contextual factors also affect the development of social competence; among such factors, the Conduct Problems Prevention Research Group (1999a) cite family poverty, family instability, and factors negatively affecting child development, such as criminal victimization of the family, greater number of siblings, and high residential mobility. Children with more stable and advantaged backgrounds typically are exposed to the kinds of literacy-related experiences that facilitate reading and academic achievement in the early school years, and are more likely to receive active monitoring and reinforcement of prosocial behaviors and skills (Walker et al., 1995). Although many contextual factors are not amenable to intervention (particularly by schools), it is important to recognize their cumulative contribution to children's risk for social competence deficits, and to address their effects in prevention and intervention programs.

Schools, as critical socializing institutions, exert profound and lasting influence on children's social competence (Hawkins & Weis, 1985). The explicit curriculum of schools specifies desired attitudes and skills, as well as methods for their attainment, while the implicit curriculum—conveyed in a more subtle manner through rules, enforcement methods, instructional practices, interpersonal interactions, forms of student participation in decision making, and home-school communication—teaches attitudes and skills through modeling and children's own experiences. Many aspects of children's classroom experience influence the development of social competence; these are displayed in Table 1.

Goals of Social Competence Promotion Programs

SCP programs first need to define an intended scope of influence, a task made difficult by the extremely broad conceptualizations of social competence. For example, Masten and Coatsworth (1998) identified three "hallmarks of success" for children during the school years: (a) social competence with peers, (b) socially appropriate conduct, and (c) academic achievement. Walker et al. (1983) view school-aged social competence as the ability to recruit social networks, to meet the demands of teachers (who control classrooms) and peers (who control playgrounds), and to adapt to changing conditions in one's environment. While all of these competencies can be addressed in different ways by SCP programs, planners should ensure that a school program has several explicit goals that are consistent with the school's stated philosophy or mission. For example, a school that has adopted academic achievement and good citizenship as priorities might articulate such SCP goals as "personal responsibility and self-discipline in working toward a standard of academic excellence" and "active and capable participation in individual and group decision making."

Table 1. Classroom variables affecting children's social competence

Variable	*Desirable features*
Teacher expectations for academic and social performance	Explicit, unambiguous, challenging; accommodating differences
Teacher use of authority	Context-appropriate display of authoritative, democratic, or laissez-faire styles; avoidance of authoritarian control; availability of choice
Development, nature, and enforcement of rules	Student participation in rule development; clear, limited number; observable behaviors; consequences for violations consistently applied
Management of time	Task-relevant time promoting student engagement; smooth transitions; generally predictable but flexible schedule
Use of space	Desk and workspace arrangements consistent with task demands; teacher proximity to students to enable monitoring and encouragement
Goal structure	Flexibility in use of individualistic, cooperative, and competitive goals
Instructional context	Variety of one to one adult-student, small/large groups, peer-assisted, independent, and cooperative work
Nature of tasks	Challenging and stimulating; promoting active engagement; incorporate student interests/skills; minimal use of worksheets for drill and practice
Monitoring of student behavior and performance	Frequent observation and feedback to students; acknowledgment of positive achievement; ongoing assessment by using objective measures sensitive to small changes in performance; encouragement of self-regulation among students
Behavior management strategies	Reactive strategies (punishment, timeout, etc.) used sparingly; emphasis on proactive strategies (contingency plans, goal-setting); minimal use of class time to manage misbehavior; consequences stress alternative behavior and problem solving; students participate in classroom management (e.g., class meetings, conflict mediation)

Source. Adapted from Campbell and Siperstein (1994).

Although planners may be tempted to focus on narrow goals because of recent circumstances or events (e.g., violence prevention in the wake of highly publicized school shootings), it is important to identify broad outcomes that can be attained through a range of components touching on many aspects of children's school experience. For example, a goal might specify "effectiveness in managing personal and interpersonal conflict in a peaceful and respectful manner," rather than "elimination of weapons from the school environment through conflict mediation and a zero tolerance policy." In this way, the school can avoid the fate of many SCP programs that are abandoned when they fail to have an immediate impact on narrowly construed goals, when resources for a specific activity are withdrawn (especially when no institutional "ownership" of the activity has been cultivated), or when the fanfare surrounding a particular bandwagon issue or approach fades.

It is also important to understand the difference between *social competence* and *social skills*. Social skills are the specific strategies and behaviors used to accomplish social tasks such as making requests, making friends, and initiating interaction. Socially skillful behavior is presumed to lead to social competence, which refers to the overall effectiveness and positive social impact of an individual's behavior (Walker et al., 1995). This distinction is important because an effective SCP program requires more than the adoption of a specific social skills training program. It is reflected in many aspects of the school culture, including disciplinary policies, teaching practices, and decision-making procedures. The yardstick for the success of a school's SCP program is the extent to which administrative and instructional practices support the development and display of socially competent attitudes and behavior among students.

School psychologists with training in organizational consultation are especially well prepared to assist school administrators in the process of setting goals that are consistent with the school's stated philosophy, are responsive to community needs, and are sufficiently broad to accommodate a number of specific objectives. Though administrators and teachers may be inclined to bypass planning stages in their eagerness to adopt curricula or plan activities, school psychologists can help them to understand the importance of goal-setting. A set of comprehensive goals devised by members of the school community elicits support for subsequent implementation efforts, legitimizes the use of school resources for SCP activities, assures that a variety of needs is addressed, and serves as a benchmark for program planning and evaluation.

BEST PRACTICES

Elements of School-Based Social Competence Promotion Programs

In contrast to typical practice, which defines social competence promotion in terms of a particular curriculum or program offered in the school, best practice requires a broad conceptualization of social competence as a goal toward which a variety of activities and experiences is directed. Walker et al. (1996) identified four school-based systems in which SCP might occur. The *school-wide system*, which addresses the general school population, establishes school climate or culture through rules and standards for performance, organizational features and practices, and priorities for instructional activities. A *specific setting system* governs behavior in the common areas in which students spend time daily (e.g., cafeteria, playground, buses). The *classroom system* is largely under the control of teachers, who establish and enforce policies and procedures within an instructional setting. Finally, the *individual student system* provides direction for responding to the needs of students who present problematic behavior. SCP programs reflecting best practice will incorporate program elements in each of these four systems.

A comprehensive approach to SCP is based on models of effective prevention, which incorporate three broad functions in program goals and activities. *Primary prevention* is reflected in academic instruction, training for all children in an array of social problem-solving skills, enhancement of school and classroom climate, extracurricular activities, and teaching and disciplinary practices that confer and promote social and personal responsibility. *Secondary prevention*, which targets children at risk for problematic social adjustment, includes early screening and intervention (including social skills training) to interrupt negative behavior patterns and address skill deficits, enforcement of disciplinary policies for infractions of rules, activities to draw at-risk children and youth into the conventional mainstream, and supportive services to families experiencing acute or chronic disruption. *Tertiary prevention* seeks to minimize the harmful impact of established social adjustment problems, and includes academic remediation, training in survival and social skills such as anger management and self-control, career and vocational training, and efforts to reduce the likelihood of school dropout.

Often, schools' SCP efforts consist of primary prevention initiatives (e.g., drug and alcohol awareness programs, weekly lessons drawn from a social skills curriculum), which are offered to students across a wide range of ages, coupled with tertiary prevention activities (e.g., tutoring students with academic deficiencies) aimed at older students with well-established patterns of problem behavior. Drawing on the research literature about effective prevention, school psychologists can emphasize the need for a fit between levels of prevention and student characteristics, such as age, risk status, and developmental levels (McNamara, 1995). For example, a school psychologist, knowing that early intervention is essential for meaningful behavior change, might offer to work with primary grade level teachers to develop classroom interventions for use with children displaying antisocial behavior patterns.

By now, it should be clear that SCP programming is a broad undertaking extending far beyond choosing a social skills curriculum for the primary grades or training a select group of students to serve as peer mediators. A review of the research literature reveals eight major objectives for school-based SCP programs (see Table 2). In the following section, each of these objectives is accompanied by a description of corresponding program elements.

Objectives for Program Design

IDENTIFY CHILDREN AT RISK FOR SOCIAL PERFORMANCE DEFICITS AT THE POINT OF SCHOOL ENTRY

Children whose early life experiences socialize them into negative behavior patterns (i.e., early starters) are unable to make a successful transition to school, where they find it impossible to meet expectations for prosocial behavior and self-management under conditions of greater structure. Ultimately, their problematic behavior leads to rejection by teachers and peers, a condition that is a powerful predictor of later, more severe, life problems (Walker et al., 1995). Although research demonstrates that intervention before age 9 is crucial to effect meaningful change in the patterns of problem behavior exhibited by these children, most school-based programs bypass younger children in the mistaken belief that children will outgrow these negative patterns, reserving intervention resources for pre-adolescents and adolescents. Intervention at younger ages has a greater likelihood of success, but requires a reliable method for identifying children in need of services (Conduct Problems Prevention Research Group, 1999b). A system for screening children for behavior problems in kindergarten or first grade is an important secondary prevention component of a comprehensive SCP program. With widely acknowledged expertise in assessment, school psychologists might contribute to early screening activities by suggesting specific instruments and procedures, providing accurate interpretations of screening results, and supporting appropriate interventions linked to assessment findings.

Several instruments are available for screening purposes, including the Student Risk Screening Scale (Drummond, 1993), which consists of seven items that are rated on a 3-point scale, and can be used by teachers to evaluate large groups of children. Items included in the scale assess stealing; lying, cheating, and sneaking; behavior problems; peer rejection; low academic achievement; negative attitude; and aggressive behavior. The Child Behavior Checklist (Achenbach, 1991) is recommended by Walker et al. (1995) as another instrument that can detect early patterns of antisocial behavior. They describe a screening process in which teachers nominate children whose behavior matches a profile consisting of rule violations, aggression toward others, damaging or destroying property, taking things without permission, and a sullen, agitated emotional state. Teachers and parents then rate the behavior of these students on the aggression subscale of the Child Behavior Checklist. Children whose scores on either teacher- or parent-rating forms fall two or more standard deviations above the subscale mean are considered to be at risk for serious antisocial behavior problems.

The nature and extent of early intervention efforts vary with children's needs and setting characteristics. However, programs such as First Step to Success, available from the Institute on Violence and Destructive Behavior at the University of Oregon, have demonstrated their effectiveness and serve as models for identification and intervention. First Step is designed to divert young children (grades K–2) from problematic behavior patterns through a systematic and collaborative process involving teachers, parents, and "coaches," or consultants. The program is implemented across a 2- to 3-month period in both kindergarten and home settings, providing opportunities for children to learn adaptive patterns of school behavior and for training parents to teach children skills contributing to school success. The classroom component involves monitoring and reinforcing children's prosocial behavior, with signals to indicate the appropriateness or inappropriateness of behavior. The home component teaches parents about a set of six skills that children need to master for success in school: communication and sharing at school, cooperation, limit-setting, problem solving, friendship-making, and developing confidence. Consultants teach one skill per week to parents during hour-long sessions held in the home. Lessons include materials

Table 2. Objectives for school-based social competence promotion programs

- Identify children at risk for social performance deficits at the point of school entry.
- Provide appropriate and intensive intervention to children displaying problematic behavior patterns.
- Develop discipline policies that emphasize rehabilitation over punishment, that provide clear guidelines for behavior, and that are enforced in a consistent and even-handed manner.
- Promote caring and stable interpersonal relationships between students and adults.
- Modify instructional practices to increase active engagement in learning.
- Offer frequent opportunities for students to learn and demonstrate socially responsible behavior.
- Support the role of families in promoting social competence.
- Evaluate the impact of program activities.

and strategies that parents can use to provide opportunities for children to practice newly learned skills (Golly, Stiller, & Walker, 1998).

PROVIDE APPROPRIATE AND INTENSIVE INTERVENTION TO CHILDREN DISPLAYING PROBLEMATIC BEHAVIOR PATTERNS

It is beyond the scope of this chapter to provide a detailed review of principles underlying effective interventions for children's problematic social performance. However, Walker et al. (1995) have furnished several guidelines pertaining to the structure and delivery of such interventions in school-based SCP programs (see Table 3). First, they recommend that intervention planning occur in context of an individualized, functional assessment of behavior. The purpose of this assessment is to identify the purposes of problematic behavior; that is, what the child intends to accomplish through the behavior, as well as environmental conditions affecting the occurrence of the behavior (e.g., rules or standards for behavior, teacher demands for academic and social behavior, enforcement methods, difficulty level of materials and activities). The process of functional assessment yields information useful in planning behaviorally based intervention approaches, which have been found to be more effective than other, non-behavioral approaches in producing significant positive outcomes (Gottfredson, 1997). Moreover, documentation of behavior intervention plans based on the results of functional behavior assessment may be needed to satisfy the requirements of the Individuals with Disabilities Education Act (1997) for children with disabilities whose behavior interferes with their ability to learn.

Second, interventions for problems related to social competence should always include strategies to promote empathy and responsible decision making, since these keystone skills are frequently deficient among children displaying inappropriate and antisocial behavior. The Positive Peer Culture program described by Vorrath and Brendtro (1985) emphasizes the development of these skills through student participation in small groups (led by adult facilitators, such as school psychologists) where members employ problem-solving methods in a mutual assistance framework.

Third, interventions should promote positive, alternative ("replacement") behaviors that are at least as efficient as the behaviors they are intended to replace. That is, alternative behaviors should be successful in accomplishing the child's purposes at (what the child perceives to be) an equal or lesser cost. For example, a child who employs aggressive behavior to gain a sense of power and control over others might be taught to exercise leadership in a classroom activity. The child will likely adopt the proposed alternative as long as he or she regards it as effective in attaining a sense of power, and does not believe that it will require resources or skills beyond his or her own ability to perform. Equally significant, the "cost" of a behavior also must be assessed in terms of any potential, negative consequences of the new behavior (again, as perceived by the child). If the child fears that classroom leadership activities will elicit teasing from peers, then this alternative to aggressive behavior is likely to be rejected.

Fourth, Walker et al. (1995) advise that only positive strategies be employed at the outset of an intervention plan (e.g., social skills training, limit setting, daily debriefings about problems encountered, self-monitoring, re-statement of rules, incentives), with the addition of aversive strategies (e.g., timeout, suspension, removal of privileges) only if positive strategies fail to produce desired effects.

Table 3. **Guidelines for intervention with students displaying problematic behavior patterns**

- Use functional behavior assessment as basis for planning interventions.
- Include strategies to promote empathy and decision making.
- Promote functionally equivalent (positive) replacement behaviors.
- Employ only positive strategies at onset, adding negative strategies only if necessary.
- For group interventions, include positive peer models.
- Involve primary caregivers in interventions.

Source. Walker et al. (1995).

Fifth, interventions that are delivered in a group format should provide for participation by peers who demonstrate positive and skillful social behavior, since their participation keeps the group from assuming a negative identity and enables them to serve as models of positive behavior and prosocial attitudes. In this way, the (inadvertent) negative and damaging effects of segregating children for intervention with similarly troubled peers can be avoided (Gibbs, Potter, Goldstein, & Brendtro, 1996; McNamara, 1996; Vorrath & Brendtro, 1985).

Sixth, Walker et al. (1995) recommend that planners attempt to involve primary caregivers in interventions, even when they are reluctant to participate in planning or implementation activities.

Social skills training programs are perhaps the best-known component of school-based SCP efforts (see Gresham's chapter on social skills, this volume). Miller, Brehm, and Whitehouse (1998) cite research indicating that social-cognitive deficits play a significant role in the development of socially problematic behavior over time, and that such deficits reveal themselves in poor problem solving, misjudgments about social situations, and inadequate strategies for managing conflict situations. Efforts to correct these deficiencies cannot be limited to students' participation in the social skills curriculum offered in a preventive context to all students; instead, individually tailored interventions addressing specific social skill deficits must be implemented. By recommending appropriate procedures for assessing social skills, school psychologists can help educators avoid the "one size fits all" approach to social skills training that is especially inappropriate as the secondary prevention intervention needed by at-risk students.

Jones, Sheridan, and Binns (1993) describe a school-wide social skills assessment and training model that provides in-class social skills training for all students and intensive small group training for at-risk students. They review a number of assessment procedures, including direct observation, teacher and parent rating scales, sociometrics, self-report of social skills, teacher and parent interviews, and child interviews. Walker et al. (1995) offer an assessment procedure in which classroom teachers identify social skill problems by using a matrix to rate students across a set of core social skills, including listening, greeting others, joining in, complimenting, expressing anger, keeping friends, doing quality work, following rules, using self-control, offering assistance, disagreeing with others, being organized, and having conversations. The resulting matrix can be examined at several levels:

1. To determine the overall skill level of the class and whether specific skills represent deficiencies for a number of children.
2. To discover sub-groups of children displaying similar skill deficiencies.
3. To identify children who are deficient in a number of core social skills.

Screening results can be used to plan instructional activities, whether for the entire class, for sub-groups of children with similar skill deficiencies, or for individual children requiring more intensive remedial interventions. The Social Skills Rating System (Gresham & Elliott, 1990), a formal instrument designed to evaluate children's social skills for purposes of intervention planning, allows teachers to rate a set of social skills according to their frequency of occurrence, as well as perceived importance of the skill.

Gresham (1986) distinguished between problems arising from skill deficits and those attributable to performance deficits, observing that this distinction is critical to successful intervention efforts. Problems arising from a failure to perform a known skill—or non-fluent performance of the skill—should be addressed through motivational strategies and increased opportunities for practice. Skill deficits, on the other hand, require instructional intervention. For individual children, a functional assessment should be used to reveal whether problems represent a failure to have learned the desired behavior (skill deficit) or a failure to display an already-learned behavior (performance deficit). Commercially available programs for teaching social skills include the PREPARE Curriculum (Goldstein, 1988), Aggression Replacement Training (Goldstein & Glick, 1987), and Social Decision Making and Life Skills Development (Elias, Friedlander, & Tobias, 1995).

DEVELOP DISCIPLINE POLICIES THAT EMPHASIZE REHABILITATION OVER PUNISHMENT, THAT PROVIDE CLEAR GUIDELINES FOR BEHAVIOR, AND THAT ARE ENFORCED IN A CONSISTENT AND EVEN-HANDED MANNER

A set of core features characterizing effective discipline policy has been identified by a number of researchers (See Table 4). These features include (a) clear communication of rules and expectations for student behavior, (b) willingness to act immediately to deliver appropriate consequences when rules are broken, (c) monitoring of the behavior of students as a group, and (d) a system through which positive behavior is recognized on a routine basis (Gettinger, 1988; Hawkins & Lam, 1987; Mayer, 1995). At an institutional level, Walker et al. (1995) observe that the success of a school discipline policy depends on (a) the presence of strong leadership, (b) commitment on the part of school staff, (c) guidelines specifying circumstances in which administrators (versus teachers) should manage problem behavior, (d) staff development and training, (e) data management and evaluation allowing record keeping for disciplinary actions and outcomes, and (f) structures allowing for periodic evaluations and revisions of the policy.

Walker et al. (1995) describe five general phases in planning a school-wide discipline policy. The first phase requires school staff and other members of the school community to reach agreement or consensus about the basic purposes of the disciplinary policy. A review of the goals that have been articulated for the schools' SCP program can help guide this process. Next, expectations for behavior should be specified, including examples of appropriate and inappropriate behavior related to each expectation. It is important for a school-wide discipline policy to also specify expectations for unique or potentially problematic settings (e.g., cafeteria, buses, library). In the third phase, a plan is devised for teaching students the agreed-upon expectations for behavior (i.e., practices for acknowledging positive behavior; informal instruction in expected behaviors, including reminders, supervision, and feedback; and formal instruction in expected behaviors, including description and modeling, supervised practice, pre-correction for problematic settings and students, and behavior-descriptive praise of expected behavior).

The fourth phase involves the development of procedures for responding to problem behavior, including designating behaviors as minor infractions, serious violations, or illegal behavior. Responses to minor

Table 4. Features of effective discipline policies

- Presence of strong building leadership.
- Commitment on the part of school staff.
- Guidelines for administrator (versus teacher/staff) management of problem behavior.
- Staff development and training.
- Data management and evaluation.
- Structures for periodic policy evaluation and revision.
- Clear communication of rules and expectations.
- Willingness to act immediately to deliver consequences.
- Monitoring of student behavior as a group.
- Routine recognition of positive behavior.

Source. Gettinger (1988); Hawkins and Lam (1987); Mayer (1995); Walker et al. (1995).

infractions, usually managed by individual staff, include removal of attention, redirection, prompts and reinforcement, warnings involving choice, loss of privileges, use of additional resources in the school (administrators, specialists, assistance team), and documentation of the problem and intervention attempts. When minor infractions persist despite the actions of individual staff, Walker et al. recommend that a problem-solving meeting be convened so that a formal intervention plan can be developed.

The zero tolerance position adopted by many schools in the wake of incidents of school violence in recent years is a controversial response to serious rule violations. The removal of students from school often exacerbates problem behavior, since excluded students are deprived of exposure to positive influences and learning opportunities, and are more likely to subscribe to norms of antisocial, non-normative conduct (Walker et al., 1996). Arguments favoring intensive intervention while retaining students in school are especially compelling in light of research showing that 80% of all crimes are committed by high school dropouts (Walker et al., 1995).

The fifth and final phase in planning a school-wide discipline policy involves the development of procedures for keeping records related to policy implementation, and for disseminating the plan to every member of the school community (i.e., students, parents, teachers, staff, community representatives). In summary, discipline policies that employ proactive approaches emphasizing problem solving, in contrast to policies that rely primarily on reactive, punitive procedures, serve as a critical component of an effective SCP program.

Promote Caring and Stable Interpersonal Relationships Between Students and Adults

Research has demonstrated relationships between the quality of student-teacher relationships and variables contributing to school success, such as academic motivation and attitudes toward school (Anderman & Maehr, 1994; Eccles, Wigfield, Midgley, Redman, MacIver, & Feldlaufer, 1993). A caring relationship with one or more adults has been cited as a powerful protective factor for children at risk for a variety of problematic social behaviors, including substance abuse and school dropout (Doll & Lyon, 1998). A program of research conducted by Eccles and her colleagues has identified a trend of increased impersonality and fewer opportunities for sustained contact between students and teachers as students proceed through their school careers. As students reach the middle and secondary school years, social networks are likely to be disrupted as a consequence of greater numbers of students, larger class sizes, and increases in between-classroom ability grouping. Coupled with increasingly greater emphasis on teacher control and discipline and less attention to the behavior and needs of individual students, these trends fail to support—and, in fact, mitigate against—stable, caring relationships between students and their teachers.

There are several methods for improving the stability of relationships as part of a school's SCP efforts. Felner, Ginter, and Primavera (1982) described a plan where the role of homeroom teachers was redefined to allow frequent, sustained contact between students and teachers, replacing the brief, unidirectional, and impersonal communication characteristic of typical homeroom periods. Similarly, grouping students into teams or "houses," sometimes known as schools within schools or small learning communities, provides opportunities for overlap and consistency in teacher and peer contacts over the course of the school day. Mentoring strategies, which pair adult staff with students for advising, academic and behavioral monitoring, and participation in school activities, represent another promising avenue for increasing the frequency of interaction and enhancing the quality of adult-student relationships. The practice of pairing of children with adults is a major feature of the Primary Mental Health Project (PMHP) (Cowen et al., 1996). PMHP assigns "child associates," selected on the basis of their capacity for warmth and empathy, to provide direct, ongoing support services to young children at risk for school adjustment problems. The Child Development Project (Battistich, Watson, Solomon, Schaps, & Solomon, 1991) is a promising approach to school reform that views schools as caring communities. Its components include cooperative learning activities, learning experiences providing opportunities for self-direction and influence over classroom activities, teaching and modeling of prosocial values in daily interactions, disciplinary procedures by using democratic procedures in context of "classroom communities," home-school cooperation, and service activities.

MODIFY INSTRUCTIONAL PRACTICES TO INCREASE ACTIVE ENGAGEMENT IN LEARNING

The development of academic competence is a primary goal of schools, and serves as a benchmark against which the value of innovative programs is often measured. Some have argued that school-based SCP activities serve only to divert educators' attention from this goal, and recommend the elimination of SCP programs in favor of a strong, back to basics academic emphasis. In recent years, however, advocates for school-based SCP programs have pointed to the optimization of academic competence as a major objective of SCP efforts. In Project Achieve—a school-wide approach to addressing the needs of at-risk children—empirically validated components of successful academic intervention (such as curriculum-based assessment and training teachers in effective instructional methods) are emphasized along with social skills training and school climate interventions (Knoff & Batsche, 1995). In an extensive review of the literature, Masten and Coatsworth (1998) cite academic achievement as a key component of competence during the school years, while Kauffman and Burbach (1997) argue that effective instruction is "the first defense against school violence and disruption" (p. 324).

Effective instructional methods lead to students' active engagement in the learning process, whether in the form of silent reading, discussion, responding to questions, or reciting math facts. Active engagement in learning has been established as a powerful predictor of academic achievement, and can be accomplished through the provision of frequent opportunities for students to respond during instructional activities (Lentz, Allen, & Ehrhardt, 1996). Thus, SCP in a classroom might include the use of peer-assisted learning, where the probability of student responding is increased due to the "demand" characteristics of the peer-to-peer condition. Other elements of effective instruction include positive contingencies for accurate performance, immediate feedback and error correction, frequent and direct measurement of academic skill (curriculum-based assessment) to monitor progress, and aspects of the teaching process such as pacing and appropriate use of modeling, prompting, and fading procedures (Lentz, Allen, & Ehrhardt, 1996). These methods are effective both for class-wide instructional purposes and as the basis for planning interventions for students who have been identified as underachieving or mildly disabled learners. School psychologists who have expanded their role to include consultation for intervention planning will find ample opportunities for involvement in this aspect of a school's SCP program, whether through participation in curriculum-based assessment activities, as a source of information and training for teachers and other instructional personnel, or as a member of teams addressing specific academic needs.

Students' attitudes toward work play a powerful role in achieving academic success, and shape their view of themselves as competent and productive members of society (Maehr & Midgley, 1991). These attitudes are undoubtedly influenced by the nature of the work they are given to do, and the manner in which it is presented. If academic assignments consist largely of work that is not matched to students' instructional levels, or if tasks are dreary and repetitive, then active engagement in learning is unlikely to occur.

Research indicates that students' academic motivation declines over time, a finding partly attributable to changes in teaching practices from the elementary grades to middle and secondary levels (Eccles et al., 1993). Many classrooms are characterized by "ability-focused" goals that emphasize judgments about students based on their ability to achieve success and outperform peers regardless of the nature of tasks, in contrast to "task-focused" goals that promote the accomplishment of challenging tasks and the attainment of understanding, insight, or skill. Research demonstrates that a task-focused classroom environment exerts a positive influence on the motivation of students, especially those considered to be at risk for academic failure (Maehr & Midgley, 1991). Classroom practices found to contribute to a task focus include (a) the availability of choices and opportunities for decision making, (b) grouping on the basis of interests and needs rather than on the basis of ability, (c) evaluation practices that define success in terms of effort and improvement, and (d) opportunities for peer interaction and cooperation.

Task-oriented environments also eschew the practice of providing rewards for school attendance, grades, or achievement. Wonderly (1991) asserts that the unnecessary use of rewards undermines intrinsic motivation by focusing attention on the reward that results from task completion, rather than on the sense of satisfaction and enjoyment available in the work itself. Whatever role they play in influencing motivation, incentives should be used with caution and in accordance with best practices as defined in the applied behavior analytic literature. Although the use of programmed incentives is a topic of continuing debate, social expectations often require individuals to perform in the absence of an immediately apparent reward, suggesting that the promotion of intrinsic motivation ought to be an important component of SCP programs.

OFFER FREQUENT OPPORTUNITIES FOR STUDENTS TO LEARN AND DEMONSTRATE SOCIALLY RESPONSIBLE BEHAVIOR

Wigginton (1994) issued a powerful indictment of schools when, as a former teacher serving time in prison, he described the striking parallel between schools and prisons: "In some ways, life inside prison mimics that in the public schools. In both places, the way the institution responds to the individual's desire to seek meaning in life makes all the difference" (p. 64). Wigginton goes on to describe the typical school experience in the form of restricted and monitored physical movement; rules and routines devised, and decisions made, with no student input; and the threat of punishment as a primary means for behavior control. He correctly points out that the hunger to achieve a worthwhile goal can (and will) be fulfilled through socially responsible pursuits, or through antisocial pursuits such as gang membership and delinquent activity. If the best way for students to learn responsibility is for them to be given responsibility, then it appears that typical school practice (which reserves the assignment of responsibility to students already deemed responsible) fails to teach this important quality to those most in need of it.

Social responsibility is revealed in a number of attitudes and behaviors, including a sense of belonging to prosocial peer groups and institutions, endorsement of conventional norms for behavior, avoidance of peers and adults engaged in antisocial behavior, skill in self-regulation (self-discipline), and a willingness to engage in problem solving to obtain desired outcomes. The development of social responsibility is closely related to issues of classroom and school climate. In 1986, Denise Gottfredson reported the results of a study where changes in factors related to school climate (i.e., institutional response to rule violations, availability of teacher support, promotion of prosocial behavior, and recognition of positive, responsible behavior) led to decreases in student misconduct and an enhanced sense of belonging among students. Table 5 summarizes a number of school practices that promote social responsibility, including (a) instruction in self-management strategies as interventions for impulsive or inappropriate behavior, (b) active teaching of social norms and expectations for behavior, (c) promoting group accountability for the behavior of individual members, (d) encouraging student leadership, (e) providing choices in instructional matters, and (f) creating opportunities for prosocial peer interactions and meaningful decision making (Wentzel, 1991; Maehr & Midgley, 1991).

Classroom meetings are powerful devices for involving children in problem solving, addressing class-wide concerns or needs, and fostering a climate of responsibility and mutual respect. A model for class meetings has been described by Nelsen, Lott, and Glenn (1993), and this model promotes positive interaction among peers (e.g., compliment-giving and receiving), emphasizes the importance of accepting responsibility for one's actions (e.g., compliance with agreed-upon consequences for rule violations), and teaches students a respectful procedure for setting standards for behavior and resolving interpersonal differences. The author has observed school psychologists providing training to teachers in the form of modeling, guided practice, and feedback about their performance as a facilitator of classroom meetings.

Table 5. School practices that promote social responsibility

- Instruction in self-management strategies as interventions for impulsive or inappropriate behavior.
- Active teaching of social norms and expectations for behavior.
- Promoting group accountability for the behavior of individual members.
- Encouraging student leadership.
- Providing choices in instructional matters.
- Creating opportunities for prosocial peer interaction and meaningful decision making.

Source. Maehr and Midgley (1991); Wentzel (1991).

The EQUIP model, developed by Gibbs, Potter, and Goldstein (1995), serves as an example of an intervention that incorporates the dimension of social responsibility in efforts to address problematic behavior. EQUIP offers skill training and practice within the context of a supportive, prosocial peer group. Because group meetings are structured so that participants (in groups of seven to nine students) must use their newly learned problem-solving skills to help others solve personal problems, learning occurs within a motivational context driven by the desire to contribute to others. A similar model has been employed on a pilot basis with at-risk youth, who are invited to participate in student-led groups that also include prosocial peers. Groups plan and implement a service project, learning specific social skills as the need for such skills arises (McNamara, 2000).

SUPPORT THE ROLE OF FAMILIES IN PROMOTING SOCIAL COMPETENCE

Although it may not be possible for school personnel to directly intervene on stressors (e.g., poverty, unemployment) that exacerbate conditions associated with social competence deficiencies (e.g., family instability and ineffective parenting), some forms of support are within schools' ability to provide. The Parent Program component of the School Development Program developed at Yale University (Haynes, Comer, & Hamilton-Lee, 1989) employs several levels of parent involvement to achieve school improvement goals and encourage parent endorsement of educational goals. Parents become involved in the life of the school as participants in social-recreational events, providers of service in daily school tasks, such as cafeteria and playground supervision and material preparation, and as members of school governance committees. Heller and Fantuzzo (1993) found that specific, neutral, and regularly provided information to parents about children's school attendance, homework, and behavior enhances parental monitoring of behavior, and increases their support for children's active engagement in learning and school activities. In some instances, more intensive service to families is required, and may include training in appropriate child behavior management techniques.

The Homebase parent training module of the First Step program (Golly et al., 1998) includes six in-home lessons and regular check-ins to discuss progress in skills taught in the previous lesson. Lessons seek to improve children's performance in following rules, cooperating, listening, and getting along with peers. Homebase also offers group meetings for parents upon conclusion of the six-week training during which implementation issues can be discussed. The services of community-based agencies are also incorporated in the First Step program, affording an additional level of intervention for at-risk children and their families.

The Adolescent Transitions Program (ATP) (Dishion, Andrews, Kavanagh, & Soberman, 1996) includes a strong parent focus where training activities address three key family management skills: prosocial fostering (monitoring and supporting positive behavior at school), limit setting, and problem solving. Activities are conducted across 12 group sessions, augmented by four individual meetings with each participating family addressing specific change-related concerns. The program was found to be effective in engaging parents, improving parent-child relations, and improving student behavior.

EVALUATE THE IMPACT AND SUCCESS OF PROGRAM ACTIVITIES

To ensure accountability and to demonstrate student-specific outcomes, evaluation of SCP programs and their components is essential. A review of the literature from 1966 through 1993 yielded only seven studies examining the generalization effects of commercially available social skills curricula (DuPaul & Eckert, 1994), reflecting a troubling tendency to neglect SCP program evaluation. Even those SCP program elements found to be effective have not necessarily been adopted for widespread use, underscoring the need for valid and reliable evaluation procedures whose results inform decisions about program adoption (Miller, 1999). Walker et al. (1998) state the case for the need to evaluate SCP programs by using methods that can examine socially valid outcomes (i.e., answers to questions such as, "How are you going about creating a sense of discipline in schools that are chaotic and are ruled by disruptive youths and in which teachers are afraid of students?") rather than the "details" of positive gains on social skills rating measures or reports of self-esteem.

The success of social skills training (an important component of school-based SCP programs) is generally evaluated through the use of sociometric measures (peer ratings), behavior and overall competency ratings provided by parents and teachers, direct observation of performance in natural settings, and inspection of products reflecting degrees of socially competent performance (e.g., record of disciplinary referrals). Similarly, the overall impact of SCP programs can be evaluated by examining progress toward academic goals at the classroom or school levels by using curriculum-based assessment, and by obtaining an index of school climate through measures such as the Effective Schools Battery, which solicits student and teacher ratings of climate factors such as morale, student influence, race relations, clarity and fairness of rules, respect for students, planning and action, and smooth administration (Gottfredson, 1985). The School Climate Survey (SCS), an instrument administered in the School Development Program to elementary and secondary school staff and parents, can be obtained from Christine Emmons, Ph.D., School Development Program, 55 College Street, New Haven CT 06510. The Learning Environment Inventory (Walberg & Greenberg, 1997), a rating scale administered to students, is recommended for use by teachers who wish to assess the climate of middle and secondary school classrooms.'

SUMMARY

Schools influence the development of social competence through an explicit curriculum (e.g., a published social skills training program adopted for use at the primary grades; conflict mediation training for middle school students) and through an implicit curriculum. School psychologists and other educators who are involved in planning for social competence promotion must attend to an array of factors comprising the implicit SCP curriculum, such as schoolwide discipline policies, instructional practices, interpersonal interactions, and responses to the need for individualized intervention for students' academic and social problems.

Elements of effective SCP programs are present across the school-wide, specific setting, classroom, and individual student systems, and include

1. A clearly stated mission to which every member of the school community subscribes.
2. Standards for expected behavior and consistent application of enforcement methods.
3. Commitment to early identification and intervention for children at risk for antisocial behavior and skill deficiencies.
4. Pursuit of home-school linkages focusing on the improvement of parenting skills and support for prosocial behavior.
5. Use of empirically validated instructional practices, including strategies for promoting work as positive and intrinsically rewarding.
6. Opportunities for students to practice socially responsible behavior.

The information and suggestions discussed in this chapter address a broad range of program elements and methods. The reader may be overwhelmed at the magnitude of the challenges facing school-based SCP programs, which include adequacy of resources (funding, personnel, materials) and the likelihood of resistance or reluctance on the part of school personnel to adopt a comprehensive view of SCP programming. Although discussion of these critical issues is beyond the scope of this chapter, school psychologists must approach the planning process with an awareness of their importance and impact. The comprehensive conceptualization of SCP presented in this chapter is intended to inspire creative thinking about empirically supported initiatives that hold promise for developing socially competent youth, rather than as a mandate for the inclusion of particular program elements. The effectiveness of school-based SCP programs depends in large measure on the extent to which program values and practices are integrated into the daily life and routines of the school, rather than on the presence of elaborate or costly program elements.

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The authors of this text designed it as a practical resource for general education teachers, but its wealth of practical strategies makes it a valuable addition to the library of school psychologists. Chapters address classroom and student variables that are amenable to intervention, such as the use of classroom rules, management of transitions, cooperative learning methods, and social skill development. Detailed descriptions of modeling and coaching activities are provided, along with resources for teacher-administered assessments.

Elias, M. J., Zins, J. E., Weissberg. R. P., Frey, K. S., Greenberg, M. T., Haynes, N. M., Kessler, R., Schwab-Stone, M. E., & Shriver, T. P. (1997). *Promoting social and emotional learning: Guidelines for educators*. Alexandria, VA: Association for Supervision and Curriculum Development.
School psychologists interested in learning more about a comprehensive approach to SCP in schools will find this a valuable resource. The authors describe how social and emotional learning can be incorporated in the curriculum and reflected in school climate, and recommend specific strategies for accomplishing these objectives. In addition to providing a curriculum "scope and sequence" by grade levels, the text identifies key skills (self-regulation, perspective-taking, and relationship skills) that should be embedded in SCP programs, and addresses issues related to organizational change. Finally, the authors provide descriptions and contact information for 23 empirically supported SCP programs, including the Child Development Project; Promoting Alternative Thinking Strategies (PATHS); the School Development Program, Second Step Violence Prevention; and I Can Problem Solve, a curriculum designed for young children.

Walker, H. M., Colvin, G., & Ramsey, E. (1995). *Antisocial behavior in school: Strategies and best practices*. Pacific Grove, CA: Brooks-Cole.
This text goes beyond an emphasis on antisocial behavior to provide a comprehensive, in-depth description of a range of issues and activities related to school-based

social competence promotion programs, including school-wide discipline plans, instructional interventions, and proactive strategies for managing disruptive and socially deficient behavior.

NETWORKS

The National Mental Health and Education Center for Children and Families has been created by the National Association of School Psychologists as "an information and action network" that provides leadership and information for schools to address problems of school failure, classroom disruptions, and youth violence. This resource can be accessed via the internet at http://www.naspweb.org/center.html.

The Collaborative for the Advancement of Social and Emotional Competence (CASEL) is a network supporting educational and mental health initiatives in social competence promotion. Its purposes are to promote standards and evaluation practices for SCP programs, to compile and disseminate information about model programs and practices, to increase opportunities for educators to receive training in SCP practices, and to educate public policymakers and government administrators about effective SCP programs. CASEL's mailing address is Department of Psychology, The University of Illinois at Chicago, 1107 W. Harrison St., Chicago, IL 60607-7037. It also can be accessed via the internet at http://www.cfapress.org.casel/casel.html

59 Best Practices in Promoting a Positive School Climate

Camilla A. Lehr
Sandra L. Christenson
University of Minnesota

OVERVIEW

"A school's climate is its atmosphere for learning. It includes the feelings people have about the school and whether it is a place where learning can occur. A positive climate makes a school a place where both staff and students want to spend a substantial portion of their time; it is a good place to be" (Howard, Howell, & Brainard, 1987, p. 5).

"School climate is a relatively enduring quality of the entire school that is experienced by members, describes their collective perceptions of routine behavior, and affects their attitudes and behavior in the school" (Hoy & Miskel as cited in Hoy & Feldman, 1999, p.85).

"In general, school climate refers to the quality and consistency of interpersonal interactions within the school community that influence children's cognitive, social, and psychological development. These interactions include those among staff, between staff and students, among students, and between home and school" (Haynes, Emmons, & Ben-Avie, 1997, p. 322).

Definitions of school climate are many and varied. Researchers who have studied school climate have defined it in different ways. Educators who work to improve school climate describe it in a variety of ways, and when asked about school climate, students and parents tend to focus on different aspects. Nevertheless, students, parents, educators, and researchers sense a school's climate upon entering the building. During the initial contact with a school, first impressions occur, and one comes away with a snapshot of a school and its climate. Repeated encounters with the school and its inhabitants, extended associations with the school, or more active involvement in the day-to-day operations of the school result in the creation of a sharper image of the school's climate. A clear sense of whether the school provides a warm, friendly, and safe learning environment is developed. Questions about whether there is order and discipline, as well as high expectations for learning can be answered. Quality of leadership, degree of collaborative decision making, and respectful interpersonal relations (between students, staff, and parents) can be ascertained. There is strong evidence indicating school climate is indeed a tangible quality with implications for student learning and development.

A review of the literature suggests a variety of components comprise the construct of school climate. Although there is significant overlap across the components, each is also quite distinct. Anderson (1982) conducted a comprehensive review of research studies in the area of school climate and provided a summary of the variables that appeared to be tied to climate and/or positive student outcomes. Her categories and associated variables are listed below:

1. Ecology variables: Physical/material variables in the school that are external to participants, such as building characteristics (e.g., cleanliness, lighting, equipment), school size, and classroom size.

2. Milieu variables: Variables that represent characteristics of individuals in the school, such as teacher characteristics (number of years teaching), satisfaction, teacher morale, student body characteristics (demographic information), and student morale.

3. Social system variables: Variables that concern patterns or rules (formal and informal) of operating and interacting in the school, such as administrative organization, instructional programming, ability grouping, administrator-teacher rapport, teacher shared decision making, communication, teacher-student relationships, student shared decision making, opportunity for student participation, teacher-teacher relationships, and community school relationships.

4. Culture variables: Variables that reflect norms, belief systems, and values of various groups within the school such as teacher commitment, peer norms, cooperative emphasis, expectations, degree of consistency, consensus, and clear goals.

More recently, a review of the literature conducted by staff at the Yale Child Study Center yielded a comprehensive list of 14 components that characterized school climate (Haynes et al., 1997). The important ingredients of a healthy supportive school climate are listed in Table 1.

Most lists of school climate components have significant overlap, and components generally apply to all students. A review of 33 empirical studies of effective schooling for English Language Learners found that schools characterized by a positive school climate emphasized high expectations for students' academic achievement, along with promoting student/family involvement in the operation and activities of the school and recognizing/valuing the linguistic and cultural background of the students and their families (August & Hakuta, 1997).

Table 1. **Ingredients of a healthy supportive school climate**

Component	*Definition*
• Achievement motivation	The extent to which students at the school believe they can learn and are willing to learn
• Collaborative decision making	The involvement of parents, students, and staff in the decisions affecting the school
• Equity and fairness	The equal treatment of students regardless of ethnicity and gender
• General school climate	The quality of interactions, feelings of trust, and respect that exist within the school community
• Order and discipline	Appropriateness of student behavior in the school setting
• Parent involvement	Frequency of parent participation in school activities
• School-community relations	The support and involvement of the community in the life of the school
• Staff dedication to student learning	The effort of teachers to get students to learn
• Staff expectations	The expectations of staff members that students will do well academically and will lead a successful life
• Leadership	The principal's role in guiding the direction of the school and in creating a positive climate
• School building	The appearance of the school building
• Sharing of resources	Equal student opportunity to participate in school activities, materials, and equipment
• Caring and sensitivity	The extent to which the principal shows consideration for the students, parents, and school staff and cares about their needs
• Student interpersonal relations	The level of caring, respect, and trust that exists among students in the school
• Student-teacher relations	The level of caring, respect, and trust that exists between students and teachers in the school

Source: Haynes, Emmons, & Ben-Avie. (1997).

What are the Historical Roots of the Study of School Climate?

In her review of the history of school climate research, Anderson (1982) reported that school climate research (theory, instrumentation, and methodology) has been strongly influenced by earlier work on organizational climate in both business and university settings. In the 1950s business researchers were studying situational characteristics impacting individual behavior within organizations. Instruments were developed to assess the organizational environment, and findings were used to help design programs and strategies to improve morale, productivity, and retain employees. Instruments designed to systematically measure college environments assessed various student and school characteristics as well as student perceptions of environmental pressures exerted by a school (academic press) in relation to student performance.

Another chapter in the history of school climate began in the 1960s with an increased emphasis on the study and measurement of classroom climate. Defining, measuring, and promoting a positive climate in classrooms focused more on examining characteristics such as teacher-student relationships in the classroom, the extent to which classrooms could be characterized as individualized to meet student needs, opportunities for student participation, and degree of shared control. In general, the measurement of classroom climate involved soliciting feedback from students about the classroom environment, instructional practices, and the teacher's role. Several instruments have been developed to measure perceptions of classroom climate. On the basis of the information gathered, teachers can reflect on and modify their teaching practices and instruction. For more information the reader is referred to the work of Fraser (1986) and Burden and Fraser (1993). Whereas *classroom* climate is limited to unique features of the climate within a classroom, *school* climate encompasses the psychosocial aspects of the whole school.

Why Should School Psychologists Be Concerned With School Climate?

A POSITIVE SCHOOL CLIMATE IS AN INTEGRAL COMPONENT OF AN EFFECTIVE SCHOOL

School climate is consistently identified as a variable that is a characteristic of effective schools and one that is positively associated with academic effectiveness (Stevens & Sanchez, 1999). For many years, research has been conducted identifying factors that contribute to effective schools. In an extensive review of the research, eight factors characterizing effective schools were identified including leadership, school climate, teacher/student relations, curriculum instruction, resources and finance, physical environment, evaluation, and parent/community involvement (Borger, 1985). Research conducted by Teddlie and Stringfield (1993) across nearly 10 years confirmed several original findings of the effective schools literature including the importance of principal leadership and correlates of effectiveness including clear academic mission and focus, orderly environment, high academic engaged time-on-task, and frequent monitoring of student progress. Purkey & Smith (1983) argued that "an academically effective school is distinguished by its culture: a structure, process and climate of values and norms that channel staff and students in the direction of successful teaching and learning" (p. 68). Psychologists who work in the schools are charged to promote characteristics that comprise effective schools. The mission of the National Association of School Psychologists is "to promote educationally and psychologically healthy environments for all children and youth...." School psychologists can play an active role in creating a positive school climate, one indicator of an effective school.

THE NATURE OF THE SCHOOL ENVIRONMENT HAS BEEN SHOWN TO HAVE A STRONG INFLUENCE ON THE WAY STUDENTS DEVELOP AND LEARN

Many studies have documented the association of school climate with improved student outcomes. For example, it is more likely that students will have higher achievement, more positive self concepts, improved behavior, and higher aspirations when the climate of the school is positive (Hoy & Hannum, 1997; Kuperminc, Leadbeater, Emmons, & Blatt, 1997; Rumberger, 1995). In some cases, the link between school climate and student outcomes is relatively direct. In other cases, school climate may have a more indirect effect. For example, a favorable climate may promote a positive sense of belonging, participation in school tasks and activities, and attendance. Current research suggests these factors are more directly linked to school dropout than perceptions of school climate (Finn, 1993; Goodenow, 1993).

SCHOOL CLIMATE IS AN ALTERABLE VARIABLE THAT CAN BE IMPACTED TO AFFECT VARIOUS OUTCOMES

The opportunity to promote a positive school climate is especially encouraging in light of the many unalterable status variables associated with risk of school failure that educators are faced with on a daily basis. Although school psychologists cannot change a student's socioeconomic standing, genetic predisposition to mental illness, or ability level, we can impact the learning environment in ways that can improve student chances for a successful school experience. Furthermore, instruments are available to assess student, staff, parent, and community perceptions of school climate to help stakeholders determine areas of strength and need. From this feedback, responsive interventions can be shaped, developed, and implemented to affect real change.

IMPROVING SCHOOL CLIMATE IS A PREVENTATIVE APPROACH RATHER THAN REACTIVE OR REMEDIAL

The power of an existing positive school climate may lie in the degree to which it is an effective preventive approach. It is a prerequisite condition that facilitates a successful work or learning experience for individuals in the school setting. When high expectations are in place, order and discipline are clear, rules are consistent and fair, caring and sensitivity characterize relationships between staff and students, and reciprocal exchanges of communication with parents occur, the probability that student achievement will improve and disruptive behavior will decline increases. In schools with positive school climate, suspension rates are lower, attendance rates are higher, and students and parents have higher levels of satisfaction (Griffith, 1997; Haynes, Emmons, Ben-Avie, & Comer, 1996).

SCHOOL PSYCHOLOGISTS ARE CHALLENGED TO BE ACTIVE IN PROMOTING SYSTEMS CHANGE

Blueprint II (Ysseldyke et al.,1997) suggests that school psychologists should be leaders "in developing schools as safe, caring, and inviting places where there is a sense of community." And one of the 10 domains outlined for training and practice of school psychologists is "School Structure, Organization, and Climate." This emphasis on attending to the social context surrounding students is receiving increasing emphasis. For example, Doll (1999) calls for sweeping changes in the purpose, design, and delivery of school mental health services to children, their families, and the school that they attend. Doll and Lyon (as cited in Doll, 1999, p. 1) concluded "resilience to adversity depends as much on the characteristics of the important contexts in which children develop (e.g. family, school, community) as on the characteristics of the children, themselves." School psychologists are challenged to become active change agents initiating, supporting, and evaluating efforts to improve school climate.

BASIC CONSIDERATIONS

Theoretical Models Explaining School Climate

Over the years, several models of school climate have emerged to explain this multidimensional construct. A brief summary of two models helps to provide a better understanding of school climate and a foundation from which to promote positive school environments.

Stockard & Mayberry (1992) proposed a theoretical framework to examine the social and psychological characteristics of schools. The authors argued that the social psychological nature of schools comprising a school's climate can be organized into two broad areas: social order and social action. Social order consists of the norms and values, environmental climate, and organizational structure of the school. Social action includes the day-to-day interactions among members and includes the quality of communication and the planning and implementation of activities within the school. Each of these dimensions has an expressive and an instrumental component. Instrumental actions clarify and maintain goals and provide the necessary material support to accomplish the objectives of the organization (i.e., high academic achievement). Expressive actions promote positive feelings, motivation, and cohesion among school members. When cross-referenced, four components result. These are illustrated in Figure 1.

This model links affective, cultural aspects of school climate with more structural components of the organization including task accomplishment and achievement. Use of the model can guide the development of questions to self-evaluate the relative

Figure 1. A model of school climate in elementary schools

	Social order (School Structure)	Social action (Interactions/Relationships)
Instrumental support (Focus on achievement/task accomplishment)	Social order instrumental e.g., My school is neat and clean; there is enough space.	Social action instrumental e.g., My teachers help me think about new ways to do things; teachers let me know how I am doing.
Expressive support (Focus on promoting positive feelings)	Social order expressive e.g., My principal treats students fairly; there is an adult I can go to when I have problems with my friends.	Social action expressive e.g., I like my class; my classmates are friendly.

Source: Stockard & Mayberry (1992).

emphasis and effects of the structures, relationships, and supports that are in place. For example, do the interactions between staff, students, and parents support a high level of academic performance? Does the school structure promote positive feelings for students and staff? Does interaction between school members promote positive feelings? Is there a balance between the four components or is one emphasized more than the others?

Hoy, Tartar, and Kottkamp (1991) proposed another model, summarized in Table 2, characterizing a school's climate in terms of its health. They conceptualized healthy schools as consisting of three levels (technical, managerial, and institutional) working in harmony to address both instrumental and expressive needs and to achieve the mission or goals of the school. The technical level (morale, cohesiveness, and academic emphasis) is concerned with the teaching-learning process; the managerial level (principal influence, consideration, initiating structure and resource allocation) encompasses the internal administration of the school; and the institutional level (integrity) connects the school with its surrounding environment. When these levels are working harmoniously, the authors speculate that the instrumental goals (reaching high levels of achievement, intellectual growth) as well as expressive goals (emotional growth, high levels of trust and motivation) will be met.

From this list of components, it becomes clear that school climate is best understood as a multidimensional construct. Furthermore, all parts are necessary in order for a profile of a healthy school to be created.

Research on School Climate and Associated Outcomes

Studies have found school climate to be linked with a variety of outcomes, including student achievement, absenteeism, self-concept, behavior, and rate of suspension (Anderson, 1982; Haynes et al., 1997). In reviewing research on school climate, the reader is cautioned to be aware of the variety of attributes used to represent the construct of school climate. These attributes range from structural characteristics, such as school size, to data reflecting conditions of the school, such as the number of disciplinary problems, to student, teacher, or parent perceptions of the degree to which interactions are respectful. Despite the variety of ways that school climate is operationalized in the research, evidence has accumulated to suggest that the nature of the environment does indeed play an important role in student outcomes.

Table 2. Dimensions of organizational health

Technical level

- *Morale* is a collective sense of friendliness, openness, enthusiasm, and trust among faculty members. Teachers like each other, like their jobs, and help each other. They are proud of their school and feel a sense of accomplishment in their jobs.
- *Cohesiveness* is the extent to which the teachers and administrators form a coherent and integrated group. They identify with each other and the school.
- *Academic emphasis* is the extent to which the school is driven by a quest for academic excellence: High but achievable academic goals are set for students, the learning environment is orderly and serious, teachers believe in their students' ability to achieve, and students work hard and respect those who do well academically.

Managerial level

- *Principal influence* is the principal's ability to influence the actions of superiors.
- *Consideration* is principal behavior that is friendly, supportive, open, and collegial.
- *Initiating structure* is principal behavior that is both task and achievement oriented. Work expectations and standards of performance are clearly articulated by the principal.
- *Resource allocation* refers to a school where adequate classroom supplies and instructional materials are allocated to teachers and extra materials are readily supplied if requested.

Institutional level

- *Institutional integrity* is the school's ability to cope with its environment in a way that maintains the educational integrity of its programs.

Source: Hoy, Tartar, & Kottkamp (1991).

In a classic study, Brookover et al. (1978) found that school climate (defined primarily as academic norms and expectations of the school) contributed to the prediction of mean school achievement over and above achievement predicted by socioeconomic status and racial composition. When school climate was entered prior to SES and racial composition in multiple regression analysis, more than 72% of the variance in average school achievement was explained in a statewide random sample of 68 schools. Schools with high proportions of students from low socioeconomic backgrounds and high levels of academic achievement were characterized as having strong positive climates that fostered student self-efficacy, learning, and achievement. Brookover et al. (1978) concluded "that school composition does not necessarily determine school climate and therefore changes in school composition (changes in SES or race) in the absence of changes in climate do not guarantee changes in school level achievement" (p. 316). In their measurement of dimensions of organizational health in middle schools and academic achievement, Hoy and Hannum (1997) found school climate (as indicated by a general health index) was positively associated with student achievement in math ($r = .61$, $p < .01$), reading ($r = .58$, $p < .01$), and writing ($r = .55$, $p < .01$).

Several studies have examined the relationship between characteristics associated with school climate and truancy or dropout rates. Characteristics associated with dropout include weak adult authority, a climate of low expectations, large school size, and an absence of caring adult relationships (Wehlage & Rutter, 1986). Bryk and Thum (1989) found that 67% of the school level variance in rates of absenteeism could be explained by a variety of school level factors. Absenteeism was lower in schools with strong academic press, high student participation in academic pursuits, an orderly environment, few disciplinary problems, less internal differentiation between curriculum, and where perceived quality of teaching was high. Smaller school size contributed to engaging students at-risk, and student attendance was better in schools where adult authority and discipline policies were perceived to be fair and effective (Rumberger, 1995). By using data from the National Education Longitudinal Survey, statistical analyses revealed an increase of one standard deviation in the proportion of students who reported a fair discipline policy reduced the mean odds of dropping out by 21% ($p < .01$). Findings from these studies support the idea that internal features of schools can affect the outcomes of absenteeism and dropout for all students, and especially youth at-risk of school failure.

School climate has been associated with student behaviors and attitudes. Students' perceptions of a positive school climate are moderately correlated with a more positive attitude toward school as defined by motivation for schooling, academic self-concept, sense of control over performance, and sense of instructional mastery (Lehr & Lange, 1999). Two aspects of school climate, commitment to school, and positive feedback from teachers have been found to predict growth in students' global and academic self-esteem (Hoge, Smit, & Hanson, 1990). Boys attending middle schools who have a more positive perception of school climate tend to have fewer externalizing behaviors (e.g., aggression, delinquent behavior). Kuperminc, Leadbeater, Emmons, and Blatt (1997) found that positive perceptions of school climate were related to lower levels of externalizing problems ($r = -.47$, $p < .05$). Although this study does not allow conclusions about the direction of effects, findings suggest student perceptions of middle school climate may impact boys' behavioral and emotional adjustment.

Also, positive school climate has been associated with higher levels of parent and student satisfaction. In a study of 122 elementary schools, Griffith (1997) found parental satisfaction was best predicted by parental perceptions of a positive school climate ($p < .001$), followed by the school's empowering parents ($p < .001$) and informing parents of their child's educational progress ($p < .001$). Student satisfaction also showed a positive correlation with a more favorable perception of school climate ($r = .22$, $p < .05$). School staff who perceives a positive school climate also tended to have higher levels of job satisfaction and showed greater self-efficacy (Hoy & Woolfolk, 1993).

Findings from research examining school climate are particularly encouraging for practitioners because educators *can* effect positive change in the culture of the school if they have informed feedback from students, parents, and staff about the nature of relationships and conditions in the school. Many studies have linked a positive school climate with important student outcomes. School psychologists can share research associated with school climate and highlight its link with important student outcomes. By assessing a school's climate, educators can make informed decisions about what is working well and where change is needed.

BEST PRACTICES

Measuring School Climate

The assessment of school climate is critical to the improvement of the school learning environment. To develop a responsive action plan individualized to the needs of the school, the climate of the school must be clearly described prior to intervention. Theoretically, instruments designed to assess school climate should provide a picture of the relative health or personality of the school. This information can be gathered from multiple people (students, teachers, support staff, administrators, parents, and community members) and from perceptions of activity throughout the school. It is recommended that climate instruments are best used as "benchmarks for growth rather than hammers for change" (Freiberg, 1999, p. 5). The information that is gathered enables stakeholders within the school to highlight relative areas of strength and areas needing improvement. The information can be especially valuable for school staff to use as a means of self-reflection and self-improvement.

There are two basic kinds of climate measures: indirect and direct. Indirect measures are those where data collection does not require direct interactions with individuals. Examples include existing data sources such as student attendance, frequency of discipline referrals, suspensions, teacher rates of turnover, or student mobility rates. Indirect measures may also document physical aspects of the building, including cleanliness, maintenance, lighting, or display of student artwork or academic work. In contrast, direct measures involve gathering information from others. These kinds of measures most often include the use of climate surveys, questionnaires, interviews, or focus groups.

Direct measures of school climate are based on perceptions of others within the school setting or in the surrounding community. School climate is generally thought to be a shared perception of between groups. For example, teachers within the same school probably have a similar view of the school in terms of the general level of discipline, respect for students, level of parent involvement, or quality of leadership. Yet, it is possible that different groups within the school may have differing perceptions of the school climate. For example, we know that dropouts have a less favorable view of school climate as compared to those who persist, and students at risk attending high schools have less favorable views of school climate as compared to students not at risk (Lehr & Lange, 1999). Some may argue that these differences reflect differences between the individuals rather than the climate of the school. However, individuals involved in efforts to improve a school's climate must be cognizant of working to ensure the school is a positive place to be for *all* students.

Currently, a variety of tools designed to measure school climate are in existence. Instruments range from those that are published and have information about technical characteristics to those that have been developed informally to measure one aspect of school climate. In some cases it may make sense to design and implement an instrument based on the climate issues specific to the needs of a particular school. While locally developed instruments lack normative comparisons, and information on reliability and validity, they may provide more individualized feedback on climate factors relative to a school or district. Development of instruments to assess school climate should, nevertheless, be firmly based on theoretical constructs gathered from the relevant literature.

For the purpose of this chapter, five instruments have been selected for further description and explanation. The following criteria were considered in their selection: grounded in a theoretical framework, stated purpose for which instrument was designed, evidence of technical characteristics (reliability and validity), previous use in research and practice, number of items, ease of administration, comparable forms for various age groups or stakeholder groups, sample content, and date of publication. Each instrument has unique features and should be selected for use on the basis of user needs. In addition, these tools are easily accessible, user friendly, and are not expensive to administer. School psychologists are encouraged to share information about these instruments with colleagues, parents, or other educators who are interested in pursuing measurement of school climate using standardized measures. Information about how to obtain copies of these instruments is included at the end of this chapter.

1. Comprehensive Assessment of School Environments (CASE) (National Association of Secondary School Principals, 1986).
    - *Purpose.* Designed to measure the shared perceptions about the characteristics of an organization (school climate). The climate survey can be administered alone or with an accompanying set of satisfaction surveys to be completed by students (grade 6–12), teachers, and parents.
    - *Dimensions.* Teacher student relationships, security and maintenance, administration, student academic orientation, student behavioral values, guidance, student-peer relationships, parent and community-school relationships, instructional management, student activities.
    - *Number of Items.* 55.
    - *Levels/Age Groups.* For use with students in grades 6–12, teachers, parents, or members of the community.
    - *Technical Adequacy.* A technical manual is available containing information on validity and reliability. Dimensions were constructed after extensive exploratory and confirmatory factor analysis was conducted. Content validity is supported through the use of an expert panel in the selection and development of the items. The average internal consistency measure for scales on the Climate Survey is .81 (range of .67 to .92).
    - *Norm Group.* Norms were established based on nearly 7,900 students, 1,800 teachers, and 3,700 parents in 35 schools across the nation.

2. Effective School Battery (ESB) (Gottfredson, 1991).
    - *Purpose.* Designed to assess perceptions of students and teachers about school climate. The instrument also includes scales and items assessing characteristics of the students who attend and teachers who work in the school.

- *Dimensions.* Safety; respect for students; planning and action; fairness of rules; clarity of rules; and student influence (student version); safety, morale, planning, and action; smooth administration; resources; race relations; parent/community involvement; student influence; avoidance of grades as sanctions (teacher version).
- *Number of Items.* 31 items (student); 61 items (teacher).
- *Levels/Age Groups.* For students in grades 7–12, and secondary level teachers.
- *Technical Adequacy.* A technical manual is available containing information about reliability and validity. Estimates of internal consistency using Cronbach's alpha for the individual scales range from .70 to .90. One-year stability coefficients for the individual scales range from .62 to .84. Items and scales were developed through extensive research in the area of school climate and effective schools. In addition, correlations among the psychosocial climate scales suggest further evidence of the instrument's validity.
- *Norm Group.* Norms have been established and profiles of schools can be interpreted by examining percentile ranks. The ESB has been used with hundreds of schools. However, data about the norm sample were not included in the technical manual.

3. Organizational Health Inventory (OHI) (Hoy & Feldman, 1999).
    - *Purpose.* Designed to measure aspects of school climate via ratings of the extent to which specific behavior patterns occur in the school. The scores that are generated provide a health profile of the school.
    - *Dimensions.* Institutional integrity, initiating structure, consideration, principal influence, resource support, morale, academic emphasis, overall health index.
    - *Number of Items.* 44.
    - *Levels/Age Groups.* For use with middle school and secondary grade level teachers.
    - *Technical Adequacy.* Reliability scores (alpha coefficient) for each subtest range from .87 to .95. Construct validity for each of the scales is supported through factor analysis. In addition, each of the dimensions had high factor loadings on the general factor of school health.
    - *Norm Group.* Authors note norms were developed in an earlier study of a large, diverse sample of high schools from New Jersey.

4. School Climate Survey (Haynes et al., 1996).
    - *Purpose.* Designed to assess dimensions of school climate.
    - *Dimensions.* Fairness, order and discipline, parent involvement, sharing of resources, student interpersonal relations, student teacher relations, achievement motivation, school building, general school climate (students), achievement motivation, collaborative decision making, equity and fairness, general school climate, order and discipline, family involvement, school-community relations, staff dedication to student learning, staff expectations, leadership, school building (staff) academic focus, achievement motivation, caring and sensitivity, collaborative decision making, parent involvement, school-community relations, school building, general School climate (parents).
    - *Number of Items.* 53 items (elementary and middle school student survey); 55 items (high school student survey); 79 items (school staff survey); 55 items (parent survey).
    - *Levels/Age Groups.* Four versions of the School Climate Survey are available for use with elementary and middle school students, high school students, school staff, and parents.
    - *Technical Adequacy.* Content validity was established via the use of an expert panel. Factor analysis was used to group items measuring the same constructs. Internal consistency reliability estimates are presented for each dimension by survey. These range from .70 to .97 on all scales except parent involvement (elementary/middle school version), which is .59, and achievement motivation involvement (elementary/middle school version), which is .64.
    - *Norm Group.* National norms are available based on schools randomly selected from a national database of schools. Samples included about 6,500 elementary, 11,800 middle, and 7,200 high school students as well as 1,900 school staff and 1,800 parents.

5. School Level Environment Questionnaire (SLEQ) (Fischer & Fraser, 1991).
   - *Purpose.* Designed to assess teachers' perceptions of psychosocial dimensions of the environment of the school. In addition to a form that measures perceptions of actual or experienced learning environments, the SLEQ has another form to measure ideal or preferred perceptions of the learning environment.
   - *Dimensions.* Student support, affiliation, professional interest, staff freedom, participatory decision making, innovation, resource adequacy, work pressure.
   - *Number of Items.* 56 (seven items per subscale).
   - *Levels/Age Groups.* For use with elementary and secondary grade level teachers.
   - *Technical Adequacy.* Not available.
   - *Norm Group.* Not available.

Programs and Strategies Designed to Promote Positive School Climate

Many programs and strategies designed to foster positive school climates exist in the literature, and undoubtedly there are other important efforts that are occurring across our nation that are not documented. For this chapter, several programs and strategies illustrating the varied forms that climate improvement projects can take are described. These projects vary according to the size of the effort (e.g., comprehensive, single strategy), the targeted components for improvement, and who is primarily responsible for initiating the effort. Although these examples do not speak specifically to the role of school psychologists, it is easy to see how these programs and strategies could have been carried out with a school psychologist as a key participant in the process. All examples use a tool to measure school climate (or an aspect of it) prior to intervening, and an evaluation of the process or final results of the climate improvement effort.

LARGE-SCALE PROGRAMS WITHIN THE CONTEXT OF SCHOOL REFORM

The improvement of school climate often takes place as part of a large-scale reform effort. Perhaps the most comprehensive and widely disseminated example of a program that seeks to improve student outcomes largely through initial changes in school climate is The Yale Child Study Center School Development Program (SDP) (Comer, Haynes, Joyner, & Ben-Avie, 1996). The program is now being implemented in over 700 schools nationally and internationally and involves parents, teachers, and students in the management and coordination of all school activities. Creating a positive school climate that nurtures and sustains good psychological development and high levels of academic performance is a key feature of the model.

SDP consists of nine program elements that provide specific ways for adults to manage their relationships and plan activities to improve the climate and academic focus of their school. The nine elements include three teams, three guiding principals, and three operations. The teams include the

1. School Planning and Management Team (SPMT): Responsible for planning, coordinating, and managing the school program with input from the other two teams.

2. Student and Staff Support Team (SSST): Responsible for identifying and addressing school-level and individual student and staff concerns that affect school climate, student adjustment, and performance. This team includes individuals with expertise in child development and mental health (e.g., school psychologists, counselors, speech therapists, special education teachers, nurses) who help to identify or design programs and activities to address children's growth and development.

3. Parent Team (PT): Responsible for supporting the general mission and work of the school through parent involvement in all aspects of school life.

The three principles that guide the functioning of these teams include (a) a *no-fault* approach that requires teams to adopt a problem-solving approach to address issues, (b) a process of *consensus* that allows decisions to be made after ideas and perspectives are shared in an atmosphere of trust and mutual respect, and (c) an emphasis on *collaboration* that includes teamwork, collegiality, and shared responsibility among all team members. The SPMT is primarily responsible for the three operations including (a) the goals and activities to promote student growth for the year (Comprehensive School Plan),

(b) staff development and training, and (c) ongoing assessment and modification to document progress, identify necessary modifications, and measure outcomes.

The creation of a positive school climate is central to the work of the three teams. Effective integration and coordination of the key elements occur within the context of a positive school climate. Haynes (1998) describes the role of school climate in schools that are using the School Development Program.

> The effects of the nine SDP program elements on student performance outcomes are mediated by several essential climate dimensions, including sensitivity and caring, respect and trust, high expectations, high achievement motivation, effective leadership, strong order and discipline, a collaborative spirit, helpful and supportive teacher-student relationships, and positive student interpersonal relationships. If the SDP is implemented well, these dimensions permeate the life of the school, resulting in desirable student outcomes when coupled with effective teaching and learning strategies. An improved climate provides the context in which effective teaching and learning can take root and bear fruit.
>
> In well-functioning SDP school, there is an observable positive quality of life for students, staff, and parents. Mutual trust and positive regard characterize social interactions and students derive a sense of academic self-efficacy. In many SDP schools there is a progression of positive changes in climate, followed by positive changes in students' attitudes and behavior, followed by achievement growth (p. 7).

Goals for improving school climate are based on information gathered from climate scales developed by the Yale Child Study Center (see *School Climate Survey* instrument description). Initial assessments completed by students, staff, and parents provide baseline data that guide the design of strategies to address specific needs. Follow-up assessments help to determine whether change has occurred or whether further intervention is required.

A case study of an elementary school shows how the SDP is implemented and how school climate can be impacted (for a more detailed description see Emmons, Efimba, & Hagopian, 1998). In 1991, Norman S. Weir was described as one of the lowest achieving schools in New Jersey, characterized by student apathy and disinterest in academics, frequent fights, low staff morale, and a building that was in disrepair. The school served about 260 students in grades K–8, with a student body that was 40% African American, 40% Hispanic, 18% other nationalities, and 2% Caucasian. About 83% of the students received a free or reduced lunch over the past 4 years, and about 30% of the students received special education.

Improving the school climate was one of three main goals identified by school staff. Seven committees were formed to address designated areas related to the goals, and representatives from each committee brought issues and concerns to the SPMT through a representative committee member. One committee was designed specifically to address school climate issues. This committee (as well as each of the other committees) was responsible for developing and submitting a list of goals and objectives to improve school climate, activities to implement the objectives, and a way of evaluating when those objectives were met. Several strategies were implemented to improve the school climate. These strategies were implemented in conjunction with other activities generated by other committees to achieve the goals of improving student achievement and increasing parent involvement. Some of these strategies specific to school climate were

1. To improve caring and sensitivity as well as student teacher relations, staff viewed students as their own children and talked with them in ways that encouraged students to share their attitudes and personal issues.

2. To build student teacher relations (and promote achievement and build on student strengths), a looping strategy was incorporated so that students had the same reading teacher, math teacher, and language teacher for three years.

3. To promote achievement motivation and a strong academic press, teachers were asked to identify one or two students per class who would benefit from participating in an after-school phonics program.

4. To promote staff dedication to student learning, poverty, home environment, parent neglect, or urban location of the school were not allowed to be used as excuses for low student expectations or a low-level curriculum.

5. To improve staff expectations and sense of self-efficacy, consistent use of a no-fault approach that converts negative blaming energy to positive, problem-solving strategies was implemented.

6. To increase collaborative decision making and collegiality and feelings of inclusion and ownership, participation of each staff member on at least one committee was required.

7. To improve school building conditions, students took initiative to form a student council, and purchased new gym equipment as one of its first projects.

Efforts to make abstract ideas explicit by stating clear goals with shared contributions and shared accountability reflects and creates a positive school climate. After 5 years of implementation, the school was described as one of the highest achieving schools in the district. It became bright, clean, and well maintained. Staff members became enthusiastic about their work, and collaborated with each other in order to promote the healthy development and academic achievement of their students. Staff was also willing to engage parents as partners in the education process. Students became excited to learn, proud of their work, and volunteered to take part in activities that promoted school improvement. The authors caution that the process of school improvement and promoting positive school climate does not end once promising results have occurred. As new staff members are employed, they must receive training and become participants in the ongoing efforts. The involvement of new parents must be encouraged and nurtured. In addition, veteran staff and parents must be continually stimulated to maintain the focus on sustaining healthy psychological development and high levels of academic performance for all students. This example points to the challenge of implementing a comprehensive program, and school psychologists who are involved in these kinds of efforts must recognize the need for persistence over time in order to observe measurable impact.

PROGRAMS ADDRESSING SCHOOL CLIMATE ON A SMALLER SCALE

The improvement of school climate does not necessarily have to occur in the context of large-scale school reform. An example of promoting positive school climate on a smaller scale has been described by Andringa and Fustin (1991). Implemented in a suburban school serving students in grades K–8, this school climate project was lead by a principal and university researcher but involved the active participation of the entire faculty. A committee was formed consisting of four teachers (who had volunteered to be on the committee) and the principal. This committee served to evaluate, modify, and personalize the model of change that was proposed. In addition, the four teacher volunteers became group facilitators for the remaining 40 teachers in the school.

To begin the process of improving the school climate, each teacher was asked to identify and bring three concerns about the school's climate to the next meeting. Concerns focused on the quality of interaction between school, parents, and community; the quality of interaction between teachers and the administration; and the quality of interaction between teachers and students. The authors described a deliberate process of developing their own measurement instrument rather than using an existing instrument to assess actual concerns of the teachers. Drawing on previous tools developed to measure the discrepancy between what is perceived as the current situation (what is) and what is desired (what should be), the committee developed a 43–item instrument to assess indicators of school climate across the three major areas of concern. After staff completed the measures, four indicators showing the largest mean discrepancies were targeted for change.

According to Andringa and Fustin, an important key to the success of this climate improvement effort was the allocation of eight half days of release time over a 2–year period for collaborative planning (granted by the school board). In addition, a consensus decision-making process was used to ensure the open exchange of ideas, allowing each individual's concerns to be heard, understood, and considered before agreement was reached. Efforts initially focused on developing the collaborative problem-solving teams, and each group selected a recorder and process monitor (separate from the group facilitator). The principal and the university consultant circulated among the groups to further monitor the group process. Prior to each of the half-day meetings, the consultant met with the main committee to present and explain the agenda for the half-day meeting, as well as explain, model, and role play the process. The first three meetings included the entire faculty. Tasks consisted of defining what should be included as part of the indicators; clarification and categorization of ideas into objectives; and ranking of objectives in order of importance. Each group was then charged with developing implementation plans for each of the four identified indicators of school climate. Implementation plans included breaking the activity into steps, identifying who was responsible for the plan, and the anticipated time line for completion.

The four indicators by group are listed below with an activity designed and implemented by each group:

1. Group A Indicator: The community supports the school's teaching program.
    - *Activity.* To recognize and honor students who have achieved academic excellence, the school established criteria for identifying a student of the week, month, and year in each class. Class, school, and public recognition were provided via the newsletter, signs in school, and photographs in a display case. A recognition dinner with parents was held in May for those students with three or more grading periods on the honor roll.

2. Group B Indicator: Teachers feel that they have important input into school decisions.
    - *Activity.* To improve the transition for new teachers, veteran teachers paired themselves with new teachers. In addition, a 1-day in-service was provided and a handbook with all policies and procedures was developed and disseminated.

3. Group C Indicator: Students believe the school program is meaningful and relevant to their present and future needs.
    - *Activity.* To increase student awareness of the importance of their school work, teachers displayed students' work throughout the school, as well as in each classroom. Class activities were described in the newsletter. Positive reinforcement was provided by teachers for efforts to improve and succeed.

4. Group D Indicator: The school supports parent growth through the provision of opportunities to be involved in learning activities.
    - *Activity.* To increase parent and community awareness of school activities, students published a school newsletter and mailed one to every resident of the surrounding community (four times annually).

All activities were carried out over a 2–year period. The teachers agreed that change had occurred in addition to the stated objectives. Specifically, there was evidence of increased communication among faculty, better services for students, intercollegial interaction, and more immediate problem solving. An evaluation assessing teachers' reactions to the change process at the end of the second year revealed a clear understanding of the process and the belief that change needs were collaboratively identified. Loss of instructional time due to half–time release days, nonpayment for planning time beyond the school day, and the perception that not all faculty followed through on implementations were seen as weaknesses by the staff. Despite areas of weakness, faculty agreed to continue to determine needs and monitor implementation of objectives on an ongoing basis.

STRATEGIES ADDRESSING ELEMENTS OF SCHOOL CLIMATE

Oftentimes, rather than implementing a plan to address multiple aspects of school climate, one component of school climate is addressed. For example, educators may choose to focus on particular elements of climate such as the school's physical environment, interpersonal relationships, safety issues, or fostering greater parental or community involvement through the creation of welcoming environments. Cooperative learning strategies, programs addressing violence or bullying, in-house suspension programs that focus on incorporating a problem–solving approach, cross-grade level partnerships for children, weekly school meetings, or creating welcoming environments by decorating the school building with student artwork are examples of strategies used to promote positive school climates and learning environments. Freiberg (1998) noted that surveys of students and observations at school can help educators to identify small changes leading to significant improvements. He shared three examples of ways varying aspects of school climate can be measured and addressed.

One example describes a series of questions asking fifth and sixth graders and middle school students to identify their greatest concerns in moving from their current school to the next level. Survey results indicated top ranked concerns for students entering middle school were being sent to the principal, failure, drugs, taking tests, and giving a presentation in front of others. For students entering high school, top-ranked concerns were failure, keeping up with assignments, taking tests, and giving a presentation in front of others. Survey results were used during summer staff development workshops, where teachers and administrators developed action plans based on the information. Several strategies were developed to address student concerns. For example, introductions on the first day occurred in small groups rather than in front of the entire class, teachers helped students with study and test-taking skills, and students were given assignment/project planner books to support time-management skills. It is important to recognize feedback from students can be extremely valuable, and soliciting input helps students realize they have an opportunity to participate in shaping their educational experience.

A second example of measuring school climate is to interview students upon beginning or exiting (graduating from) a school. Questions for students graduating included (a) What do you like about your school? (b) What was your most memorable experience in high school? (c) What area would you like to have improved in your school? (d) What is one message you would like to give your teachers? Many of the students made a point of thanking teachers for making a difference in their lives. Some students made concrete suggestions about course schedules, homework, or social events in the schools. In response to the interviews (which were videotaped) teachers recognized the powerful role they played in students lives and considered modifying school tasks based on their suggestions.

The last example points to the importance of addressing seemingly small concerns as a way of enhancing school climate. The *Ambient Noise Checklist* was used to assess the noise level in the cafeteria of a Chicago school. The cafeteria was described as having excruciatingly high noise levels.

> The machines in the cafeteria were all running, an aide was using the public address system to ask Billy or Sarah to "find a seat and sit down," and the cafeteria workers seemed to be playing the 1812 Overture with the stainless steel pots and pans. Students were emptying their trays by banging them inside a metal trash can. Adults were shouting across the room asking specific students to be quiet. The students talked over this din. Few adults acted as if they were glad the students were there. The tone of the aides and other cafeteria workers was less than positive. I observed no smiles, no "good mornings," no friendly faces. When I said "good morning" to an older child, he looked at me as if I had called him a bad name. After 30 minutes in the cafeteria,'I was ready to fight" (Freiberg, 1998, p.25).

A checklist was used by the faculty and administration to identify sources of noise in the cafeteria. From this information, they developed some ideas about how to address the noise levels and proceeded to make changes, including training to help aides relate more positively to children, a teacher greeter at the front of the serving line, and use of a sponge stick to clean plates rather than banging them in the metal trash cans. In addition, students were assigned to eat at regular tables each day and were allowed to talk with any student on either side or directly across from them. Use of the speaker was discontinued, and adults walked over to children to talk with them. After several weeks, results indicated that the noise level decreased dramatically, and daily fights essentially stopped. The cafeteria became a pleasant and peaceful space within the school setting.

Guidelines for Promoting a Positive School Climate

The ingredients for promoting a positive school climate vary from school to school. Each time the recipe must be tailored to meet the needs of the students, staff, parents, and community members who are key stakeholders and participants in the creation of a healthy school environment. Yet, there are some basic guidelines that can help to facilitate a successful process and positive results. For example, Fraser (1999) suggests feedback gathered from instruments assessing school climate can be used as a basis for reflection upon, discussion of, and systematic attempts to improve school environments. He recommends the following steps that have proven effective in school climate improvement projects: (a) use of an assessment tool to gather information about perceptions of school climate, (b) compilation of data in a form that can be used as feedback about perceptions of school climate, (c) reflection and discussion of findings to help clarify implications and identify areas needing change, (d) development and implementation of an intervention, and (e) reassessment to determine whether change has occurred.

According to Freiberg (1999), the challenges of initiating a school climate improvement project can be made less overwhelming by considering five points, listed in Table 3.

Frieberg recommends initial strategies for change should begin quickly and should be visible to all students and staff. For example, at one school, staff decided to improve the faculty restrooms. They added quality paper products, assigned maintenance responsibilities across grade levels every 3 months, added air freshener, new paint, pictures, mirrors, and a bulletin board with the latest information from the school climate committee. This intervention was highly visible, and the changes enlisted the support of more faculty and staff to participate in more extensive interventions suggested by the climate committee. Another example of a quick and highly visible climate improvement strategy was initiated by a group of middle school students. These students decided that greeting students and faculty upon entering the building each morning would help improve the "friendliness" of the school.

Finally, it is especially important to consider initiating school climate improvement within the context of organizational change (Curtis & Stoller, 1995). Effecting change within schools requires changing behaviors and attitudes, as well as school organization and norms (Purkey and Smith, 1983). Change and maintenance of the change will not take place without the support and commitment of teachers who must come to "own" different or new educational ideology and techniques. A strategy of change that promotes collaborative planning, collegial work, and a school atmosphere conducive to experimentation and evaluation is critical. The most effective approach to promoting school climate sees school staff (including teachers, paraprofessionals, custodians, secretaries, etc.) as an integral part of an entire school organization engaged in development activities that take place over time. Similarly, students, parents, and community members must be included in

Table 3. Initiating school climate improvement projects: points to consider

1. *Trust your own perceptions and think about whether the school is a place where students, staff, and parents like to be.* How does the school look? How would you characterize interactions between staff and students, student and students, parents and staff? What do you feel as you enter the building? Do you sense strong leadership or high academic expectations? What evidence supports your perceptions?
2. *Consider what direct and indirect climate measures can be used to help document and create a baseline for change.* What existing data sources are available to measure school climate? Whose perceptions of school climate should be measured (students? staff? parents?). What resources are available for purchasing and analyzing surveys? Does it make sense to design and implement an instrument based on climate issues specific to needs of the school?
3. *Identify initial climate changes that can be made with a high level of visibility and within a relatively short period.* Prioritize a list of changes that will yield noticeable results. What changes do most key members of the school agree need attention? What changes can be made quickly with a minimal initial investment of time and effort?
4. *Consider what groups or individuals should be involved to encourage and create an environment for sustained school climate improvement.* Who are key players in the school? Who must be on board to help initiate and sustain this school climate improvement effort? Remember to consider membership from all major groups (student, staff, and parents). Remember to enlist the support of those who may not typically be included in school improvement efforts (community members, students considered at-risk of school failure, support staff, parents who may have been alienated in the past).
5. *Consider what long-term changes are needed to create a healthy environment for all members of the learning community.* Recognize that improving and sustaining a positive school climate is a continuous process requiring persistent and ongoing efforts. Develop a plan to maintain the changes that have been made. Develop a way of educating and including new members in the school climate improvement effort.

Source: Adapted from Frieberg (1999).

projects initiated to address school climate. Inviting a parent or student as a token representative will not suffice; to foster an investment in the project, individual contributions and participation must be welcomed, respected, and valued as part of school-wide efforts.

SUMMARY

School climate is a complex construct that has been recognized as an important component of effective schools. Definitions point to multiple dimensions including a sense of order and discipline, parental involvement, staff dedication to student learning, high expectations for academic performance and behavior, caring relationships, and respectful interactions between students, staff, parents, and community members. Today, models of school climate underscore the varied dimensions and organize the complexity of the construct. School climate is associated with a variety of student outcomes including achievement, absenteeism, self-concept, and behavior. How can school psychologists promote a positive school climate? First of all, best practice suggests that it is necessary to describe and measure school climate before developing and implementing a responsive action plan. Indirect and direct measures of school climate can be used to assess perceptions of students, staff, parents, and community members. Several tools meeting important criteria to enhance their quality (e.g., standardized, grounded in theory, evidence of technical adequacy, used in research) were reviewed in this chapter. Efforts to improve school climate have occurred within the context of national large–scale reform, or on a smaller scale at the individual school or district level. In addition, relatively simple strategies can be developed to address singular elements of school climate. Although each strategy/program will vary, there are guidelines to help ensure a successful process and positive results. It is important to conduct school climate improvement within the context of organizational change and enlist the support and active participation of key stakeholders in the school community.

School psychologists are in key positions to effect positive changes in school climate and help create schools where people like to be. Every school psychologist can begin to make these changes although they will take a variety of forms and occur at a variety of levels given job responsibilities, role definitions, and building, or district–level constraints. At a minimum, all school psychologists as professionals can participate in promoting a positive school climate by modeling desired behaviors including participating collaboratively in decision making, promoting high and achievable expectations for all students, welcoming parents as participants in the learning community, showing care and sensitivity to students as well as staff members, and interacting with others in a respectful manner. Furthermore, school psychologists must take steps to initiate awareness, interest, and programmatic changes that will improve a school's climate. As school personnel or parents become engaged in exploring and implementing change, school psychologists can offer support and bring knowledge about school climate issues (e.g., associated research, potential instruments, examples) to assist in planning. Finally, school psychologists have the training to recognize the importance of collecting data to make decisions and the skills to evaluate program effectiveness. School psychologists cannot sit back and wait for an invitation to participate; rather, school psychologists must be active catalysts for change, collaborative partners, and leaders in reform efforts directed at promoting positive school climates.

It makes sense to put efforts into promoting educationally and healthy environments for all children and youth because it has been shown to be an effective preventive approach. The words of Norris Haynes (as cited in Haynes et al., 1997, p. 322) serve to stimulate our thinking when considering the influence of school climate and student development: "poor school adjustment and school failure are often incorrectly interpreted as manifestations of cognitive ineptitude, deviant value systems, and inadequate development. The complex interpersonal interactions which occur within schools and significantly influence students adjustment and performance are not sufficiently examined". As school psychologists we are indeed challenged to address the conditions of the school environment that can help to foster academic success and healthy development for all students.

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This article provides an extensive analysis of the literature on school climate, presents theories of school climate, and draws conclusions about research findings. The history of school climate is reviewed, and the article concludes with a summary of methodological issues researchers are faced with when conducting school climate studies.

Freiberg, H. J. (1999). *School climate: Measuring, improving and sustaining healthy learning environments.* London: Falmer.

This book consists of 11 chapters describing approaches to measuring school climate from multiple perspectives. The book discusses issues related to improving school climate and provides examples of many diverse kinds of climate instruments.

Haynes, N. M., Emmons, C., & Ben-Avie, M. (1997). School climate as a factor in student adjustment and achievement. *Journal of Educational and Psychological Consultation, 8*(3), 321–329.

This brief article defines dimensions of school climate and summarizes research on school climate and student outcomes. Examples of positive school climate are also provided.

Publisher/Contact Information for Select School Climate Instruments:

Comprehensive Assessment of School Environments (CASE) (NASSP, 1986).

The instrument can be ordered from the National Association of Secondary School Principals, P.O. Box 3250, Reston, Virginia 22090. Telephone: (616) 383-1961.

Effective School Battery (ESB) (Gottfredson, 1991).

The instrument, information about scoring, and the norm group can be obtained from Gottfredson Associates, Inc., 3239-B Corporate Court, Ellicott City, MD 21042. Telephone: (410) 461-5530.

Organizational Health Inventory (OHI) (Hoy & Feldman, 1999).

A copy of the SLEQ and directions for scoring are available in Hoy & Feldman (1999). APC computer scoring program for the OHI can be purchased from Arlington Writers, 2548 Onandaga Drive, Columbus, OH 43221. The program will automatically score the data and standardize the scores using the current norms.

School Climate Survey (Haynes, Emmons, Ben-Avie, & Comer, 1996).

The instrument can be ordered from Christine Emmons, School Climate Surveys Request, Yale Child Study Center, School Development Program, 55 College Street, New Haven, CT 06510. Telephone: (203) 737-4000.

School Level Environment Questionnaire (SLEQ) (Fischer & Fraser, 1991).

A copy of the SLEQ and directions for scoring is available in Fraser (1999)

60 Best Practices in Health Promotion for School Psychological Practice

Ellis P. Copeland
University of Northern Colorado

OVERVIEW

In past decades, children were susceptible to a host of deadly diseases. Advances in medical science that resulted in medications and vaccines have now largely addressed the ravages once wrought on children by the diseases of the past. Schools, along with other health and social service agencies, played a major role in eradicating infectious diseases through their involvement in immunization, screening, and educational programming. Such involvement needs to continue today yet in a radically different form.

Today's youth are exposed to multiple risk factors, and these risk factors are common antecedents of diverse disorders. Although this chapter will focus on building functional behaviors and reducing or eliminating dysfunctional behaviors in youth, the exacerbation and increase in health and behavior problems have their roots in the significant family, school, and neighborhood changes that have occurred during the past few decades (Consortium on the School-Based Promotion of Social Competence, 1994). These changes include a breakdown of the traditional family and traditional neighborhoods; a devaluing of parenting, of teachers, and of religious life; increased poverty rates among families with children; damaging television and media messages (i.e., sex, violence, and unhealthy dietary behaviors); lack of positive role models and a reduction in meaningful contact with positive adult role models; unsafe environments (often inclusive of the school environment); inadequate housing; and misplaced values where money becomes supreme amongst the unattended societal problems directly affecting the health of our youth.

The societal erosion noted above has affected the behavior of every youth in our nation. Consequently, the focus of our interventions are most closely tied to the behavioral patterns the youth may choose to adopt that too often lead to mental and/or physical disorders. Epidemiological data indicate that 15–25% of children and adolescents have mental health problems that warrant treatment and/ or place them in the "extremely vulnerable" category (Consortium on the School-Based Promotion of Social Competence, 1994). Further, the most serious and expensive health and social problems facing our country today are caused by negative behavioral patterns that were established during the childhood and adolescent years (Kolbe, Collins, & Cortese, 1997). Health problems spawned by negative behavioral patterns (smoking, unhealthy dietary behaviors, drug and alcohol abuse, intentional injury to others and self, sexual behaviors that can result in pregnancy or sexually transmitted diseases, and inadequate physical exercise) fuel unnecessary health care costs. Unattended health and social problems among our country's young people seriously erode their health status, educational achievement, and quality of life (Kolbe et al., 1997).

Still, these health problems/unhealthy behaviors are largely preventable and rigorous studies of health education in the schools have demonstrated that programming has effectively reduced the prevalence of health risk behaviors among youth. For example,

1. Planned, sequential health education resulted in a 37% reduction in the onset of smoking among seventh-grade students.

2. The prevalence of obesity was decreased by half among girls in grades 6–8 who participated in a school-based program.

3. Forty-four percent fewer students who were enrolled in a school-based life skills training program used tobacco, alcohol, and marijuana one or more times per month than those not enrolled in the program (School Health Programs, 2000).

Given these data, it appears that school health programs are becoming one of the most efficient means that the country might use to prevent the major mental and physical health problems as well as social problems that confront our nation.

The idea of delivery of health services to students in schools is an old one. Dryfoos (1994) noted that, in the 1980s, as conditions worsened for young people, school-based clinics began to pop up serendipitously around the country. The early programs were problem-focused (i.e., alcohol and drug, teen pregnancy) and were later superseded by more comprehensive models such as school-based clinics. Dryfoos' (1994) book, *Full-Service Schools: A Revolution in Health and Social Services for Children, Youth, and Families*, was about the transition from school-based clinics to full-service schools (schools in which health, mental health, social, and/or family services might be located). Today, full-service schools or "comprehensive school health education" is seen as the most effective form to promote healthy behaviors and prevent the previously outlined dysfunctional behaviors. However, without a radical change in societal values (society choosing to directly address major issues such as poverty and unsafe environments) and school mission, most of the nation's 100,000 schools will not implement a comprehensive program or a school clinic in the near future (Kolbe et al., 1997).

Although schools, by themselves, should not be expected to address the nation's most serious health and social problems, school health programs could be one of the most efficient means the nation might use to prevent major health and social problems (Kolbe et al., 1997). By reducing the incidence of mental and physical health problems that afflict young people and often continue into adulthood, school health programs should reduce the spiraling cost of health care, improve educational outcomes, and improve productivity and quality of life. Schools are widely acknowledged as the major setting in which activities should be undertaken to promote competence and prevent the development of unhealthy behaviors (Consortium on the School-Based Promotion of Social Competence, 1994). Further, from a primary and secondary prevention perspective, an economic perspective and demographic viewpoint, it appears essential that social initiatives such as health promotion be linked to schools.

Health promotion has been "broadly defined as a combination of behavioral, educational, social, spiritual, economic, and environmental efforts that support the establishment, maintenance, and enhancement of behaviors and life-styles conducive to overall emotional and physical well-being" (Zins & Wagner, 1997, p. 945). The definition is inclusive of mind, body, and spirit. Further, the definition is systemic and directly encourages the mobilization of community resources and the development of environments that will lead to healthy behavioral patterns during the child's and adolescent's formative years. What a challenge! These healthy lifestyles must be as easy to adopt as unhealthy ones and produce greater immediate and long-term rewards.

The challenge is an especially difficult one for the traditionally trained school psychologist. Although we have witnessed extraordinary progress in our improvement of public health (including mental health) through medical science, we know more today about how to treat mental illness than we know with certainty about how to prevent mental illness and promote health (Satcher, 1999). Larson (2000) notes that the various domains of psychology are more articulate about how things can go wrong than how they can go right. We have numerous research-based programs aimed at curbing at-risk behaviors such as violence and drug use, but we lack a rigorously applied psychology of how to promote positive youth development. Yet, our role becomes obvious given the well-established link between learning and health (Satcher, 1999).

Thus, health promotion will require us to be a part of a team of professionals from many fields working cooperatively with teachers, students, community members, and parents to provide comprehensive school health programs. These integrated efforts may include such disciplines as health education, nursing, physical education, nutrition (food) services, counseling, and school psychology (Zins & Wagner, 1997). The integrated approach will be better able to mobilize community resources to enhance health promotion efforts in the schools and society. Further, the comprehensive effort will reach virtually all children and youth and create an environment that builds health upon health in a more integrated manner.

BASIC CONSIDERATIONS

What We Know

We, school psychologists, know risk factors and at-risk behaviors. Smoking, early sexual intercourse, destruction of property, fighting, stealing, use of alcohol and/or drugs, and absenteeism are a few examples. Jessor, Turbin, and Costa (1998) have turned a number of obvious risk factors into health-enhancing behaviors. Noting the ill effects of not eating a healthy diet, not getting enough sleep, not engaging in regular exercise, not practicing good dental hygiene, and not wearing a seatbelt resulted in the Health-Enhancing Behavior Index. Benson (1993) further provides a list of factors that are associated with negative health outcomes.

Much of what we need to know to practice on a school health team was provided in the foundation courses of our accredited training programs. Program evaluation is taught in most of our training programs and is a key element to update, improve, and define the successful school health program. Consultation and behavioral change strategies are critical skills to enable one to effectively practice on a health team. Learning theory and developmental psychology are true assets. For example, developmental psychology is the study of the process of physical and emotional growth and competence, and is a critical sub-domain of social and emotional intelligence. Of course, a course focused on prevention would be most helpful. Still, most of us are able to "reframe" our skills to be more proactive than reactive.

What We Need to Know

Curriculum concerns that must be addressed are well defined in the Comprehensive School Health Program model developed by the School Health Programs (2000). According to the model, a comprehensive school plan provides:

1. Curriculum that addresses and integrates education about a range of categorical health issues at developmentally appropriate ages

2. Programming for grades kindergarten through twelve

3. Instruction for a prescribed amount of time at each grade level

4. Integrative activities to help young people develop the skills they need to avoid use of tobacco, dysfunctional behaviors, engaging in a sedentary lifestyle, etc.

5. Appropriate instruction from qualified teachers, health professionals, and concerned community members

A good curriculum specialist or teacher will be critical to curriculum development.

We need to perceive health promotion as its own set of assets and competencies and not the absence of disease as it is often defined by the medical model. For example, the Surgeon General (Satcher, 1999) defines mental health as

> The successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and cope with adversity; from early childhood until late life, mental health is the springboard of thinking and communication skills, learning, emotional growth, resilience, and self-esteem (p.vii).

Physical health is also better defined by competencies than by a lack of physical disease.

Martin Seligman, past president of the American Psychological Association, hopes to see a profound shift in the field of psychology away from pathology and toward positive psychology. In his article with Csikszentmihalyi (Seligman, & Csikszentmihalyi, 2000), they describe the foreground of this approach as prevention. Since the disease model offers little to prevent violence, depression, etc., the major strides in prevention will come largely from a perspective of building competency and not on correcting weakness. Much of the task of prevention in the next century will be on how to foster courage, future mindedness, optimism, interpersonal skill, faith, hope, work ethic, initiative, and honesty (to name several) in youth. The entire issue of the January 2000 *American Psychologist* addresses this topic.

In a related manner, Benson (1993) has identified 30 assets, referred to as protective factors, associated with positive health outcomes. Benson's acknowledged assets include caring about people, displaying assertiveness skills, motivation to achieve, positive orientation to the future, decision-making skills, involvement in church or synagogue, and acknowledgement of family support. Benson further advocates an additive view of assets that is most consistent with health goals and curriculum.

Building an Integrative Program

This section will examine some general ways to introduce and gain support for implementing a health promotion program in your school(s) or in a school district. A number of the ideas presented in the section were drawn from articles by Hightower, Johnson, and Haffey (1995) and Kelly (1995).

In any plan for change, a formal needs assessment is the best way to begin. If such an assessment is not feasible, then following one's "sense of the obvious" might be an option (Hightower et al., 1995). Such an approach involves spending considerable time in open discussion and active listening among staff to delineate a hierarchy of concerns. Once the needs are identified the homework begins. Attending workshops, visiting schools and communicating with personnel invested in a comprehensive school health program, and reading relevant journals and reports helps you to develop the expertise to better present the concept.

Before directly approaching personnel within your schools or district, a system analysis is always necessary (Hightower et al., 1995). Talking to those who know the system regarding managerial styles, communication pathways, allegiances, etc., is informative. Understanding the school board's philosophy, goals, budget for the district, procedures, etc., lets you know how the system operates. Once you know what is happening and how it happens, start at the safest point with the administrator that oversees that particular area. If the person is one of your principals, then they may be able to provide useful cues on how to proceed.

The next step is to identify school personnel that are either stakeholders and/or "customers" (people who are invested in health education) of the idea. Kelly (1995) firmly supports the idea of starting with internal support before moving to external audiences. Then, a school psychologist should obtain the input and approval of all school staff who will be involved, along with principal(s) and other supervisor input before the program is taken to the superintendent (Hightower et al., 1995). When meeting with the superintendent, be clear about what you wish to accomplish and optimistic about the level of support that the idea has achieved.

With the superintendent's blessing and approval, external audiences can be contacted. These include community agencies, parents who may be "customers," churches and synagogues, hospitals, alternative health providers, and the business community. Direct communication is far better than mass communication (i.e., newsletters), which does little to influence opinions or change behavior (Kelly, 1995). Direct communication also enables you to manage issues that may arise if the idea of health promotion is seen as too far afield by some extreme groups. Further, direct communication allows the services provided to be designed around community needs. Responding to local needs and constructing interventions to meet community needs typically results in a positive attitude from both staff and community and subsequently builds support for services to children (Kelly, 1995).

Funding

Without a major change in health care policy, a comprehensive school health program will seldom be funded to fully meet the present needs and growing demand. School-based health programs cost between $100,000 and $300,000 a year, depending on the size of the school and the comprehensiveness of the program (Dryfoos, 1994). As those who govern schools seldom mandate such programs, developing funding sources for school health programs becomes an important issue. Although most school-based centers must seek multiple financing arrangements, obvious places to start would include the local school board and the local private sector. The local school board may provide seed money yet cannot be depended on as a long-term funding source. An exception may be that if the board's hope is to fully integrate health promotion into the existing curriculum then more permanent funding may occur. Otherwise, the private sector, which includes United Way, corporations that wish to maintain and enhance their communities, and private foundations, may be more reliable and permanent resources.

Several states have adopted laws or officially supported the development of school-based clinics (Dryfoos, 1994). States may use either federal block grants or establish their own state block grants to fund such programs. In general, state agency grants tend to be much shorter, less complicated, and less time consuming than federal grants. The grants supported by states almost always follow the "residual model" (a problem causing one to resort to public assistance). Thus, to obtain a grant, one needs to document problems with drug and alcohol, at-risk youth, etc., in order to obtain funding.

Nationally, funding is typically more complex. Federal grants may be more inclusive yet typically more complicated and involved. If a school is providing medically necessary services to children and families that are Medicaid eligible, then the school could be eligible to receive reimbursement from Medicaid for eligible services and administrative supports (Wrobel & Kreig, 2000). These funds can be substantial and should mean that more children have access to health care and the health care programs that could be provided by the schools. Managed care is another option. It is possible that school-based services may overcome the hurdles of managed care in order to ensure that school-based clinics or programs are certified as providers for students whose parents are enrolled in a managed care plan.

The Centers for Disease Control (CDC) provides resources to ensure that their identified curriculum to reduce risk behaviors is available for state and local agencies interested in using them. Presently, the CDC directly funds 16 states for coordinated school health programs (funding for HIV-AIDS prevention in schools alone accounts for approximately $47 million). The Surgeon General is a strong advocate for health care, and although health care reform failed under the Clinton administration, national health care reform remains a vital agenda item on the federal scene. A comprehensive school health curriculum or health education programming is prevention and may be attractive to both the liberal and conservative elected officials.

BEST PRACTICES

In her book, *Common Purpose,* Lisbeth Schorr (1997) outlines the Seven Attributes of Highly Effective Programs, that I believe set the foundation for this chapter. These attributes (pp.5 –10) are as follows:

1. *Successful programs are comprehensive, flexible, responsive, and preserving.* While they do not try to provide everything to everyone, they are flexible, and offer more than a single strand of service or support. They often think beyond professional services and help families to strengthen bonds with neighbors and churches and other natural networks of support.

2. *Successful programs see children in the context of their families.* Effective programs are alert to the family context. They are aware that whether a child's health needs will be met depends on the coping abilities, mental health, and social and economic resources of the parent. Although enlisting the overwhelmed and overstressed parents of today requires more skill than ever before, school programs must recognize the need for deeper parent involvement.

3. *Successful programs deal with families as parts of neighborhoods and communities.* They grow deep roots in the community and respond to the needs identified by the local population. They are not just *in* the community but *of* the community so that "best practices" are often whatever works in a given context.

4. *Successful programs have a long-term, preventive orientation, a clear mission, and*

continue to evolve over time. Successful health promotion programs would primarily focus on the period from pregnancy through elementary school as the most productive time to intervene. They combine a highly flexible mode of operation with a clear sense of mission and don't abandon their fundamental mission for the fad of the moment. They maintain a stable core and share common beliefs yet adapt strategies based on the changing needs of individuals, families, and communities to reach the goals agreed upon.

5. *Successful programs are well managed by competent and committed individuals with clearly identifiable skills.* Directors of successful programs don't do it by magic or charisma but by using identifiable management techniques to create a coherent, outcome-oriented mission. They inspire staff with a shared vision of the program. Their skills are not a mystery and can be learned. They include a willingness to take risks, to tolerate ambiguity, and to win the trust of staff and the public.

6. *Staffs of successful programs are trained and supported to provide high-quality, responsive services.* Needing to be versatile and flexible, a greater discretion is given to staff. Yet, training, monitoring, and supervision are emphasized to ensure that the discretion exercised keeps with mission goals and high standards or quality. Thus, flexibility is built on competence.

7. *Successful programs operate in settings that encourage practitioners to build strong relationships based on mutual trust and respect.* Often a special relationship is at the core of the successful program. Although rarely explicitly stated, caring and relationships are often the most important aspects of a program. Last, the author points out that a spiritual dimension to the relationships contributes to fostering change.

Coordinated School Health Programs

Consistent with the belief that the most effective form of school health education is "comprehensive school health education," the Centers for Disease Control and Prevention conceives of health education as eight interactive components, including health education, physical education, health services, nutrition services, health promotion for staff, counseling and psychological services, healthy school environment, and parent/community involvement (School Health Programs, 2000). The program is consistent with Schorr's (1997) criteria in terms of comprehensiveness, mission, prevention, and utilizing the context of family and community. The program is well documented, planned, and offers a sequential program of health education for students at every grade level, kindergarten through 12. Although Congress has been most keenly focused on the health services and health education components, aside from the obvious focus on counseling and psychological services, the components of health promotion for staff and the healthy school environment are definite inroads for the school psychologist.

Kolbe et al. (1997) note that the CDC is working with other federal agencies, national organizations, and state and local departments of education, health, and social services to improve delivery of the eight components. Their strategies include (a) identifying and monitoring critical health-related events and school interventions affecting those events, (b) integrating and applying research to increase the effectiveness of interventions, (c) providing the means for relevant constituencies to plan and implement interventions, and (d) evaluating the impact of the interventions over time. Working together toward common goals is a thrust of the CDC. In 1992, CDC began providing fiscal and technical support to selected state departments of education and departments of health to jointly help school districts implement the eight components of school health programs (Kolbe, et al., 1997). In the year 2000, CDC is providing assistance to 16 states: Arkansas, California, Florida, Kentucky, Maine, Michigan, Minnesota, North Carolina, New Mexico, New York, Ohio, Rhode Island, South Carolina, South Dakota, Wisconsin, and West Virginia (School Health Programs, 2000). The CDC helps all 50 states and hopes to provide comprehensive support to all states in the near future. As school psychologists are trained across many of the psychological disciplines, they are considered to be "indispensable members of the school health team" (Kolbe et al., 1997, p. 263).

Mental Health Models

This section is written for those of us who wish to focus more on mental health/emotional services rather than on the larger spectrum, which would include physical and spiritual health. It is becoming clear that the current system of providing mental health services is not efficient and is not working effectively. By using a conservative prevalence rate of 9–13% for serious emotional disturbance, O'Day (2000) notes that, in an elementary school of 600 students, between 54 and 102 children would be in need of psychological/mental health services. Even if assigned full-time to one school, the need and the caseload would overwhelm the school psychologist. Using an individual problem-solving model might be an improvement, yet any focus on treatment or individual intervention would eventually overwhelm the psychologist and the system. Thus, a transformation in the delivery of school psychological services will be necessary to address mental health/emotional–related needs.

Zins and Wagner (1997) recognize the full spectrum of health services while providing numerous examples of mental health activities for the school psychologist to choose:

1. Helping with transitions such as moving from elementary to junior high school;
2. Developing interventions with groups of students in areas such as problem-solving, conflict-resolution and social skills, and helping create a supportive, safe environment in which these can occur;
3. Determining the availability of alcohol in the community and identifying establishments that have a history of serving or selling;
4. Implement programs to prevent smoking, alcohol use and/or premature sexual activity;
5. Teaching behavioral self-management skills to reduce violence or loss of control;
6. Providing program evaluation services to assess the outcomes of health promotion efforts;
7. And, providing instruction in stress or time-management (pp. 949 –950).

Even though most of us were trained in many of these areas in terms of pathology or remediation, the promise of the prevention of problem behaviors and promotion of healthy ones must assume greater importance. Zins and Wagner (1997) note that modification in orientation and skill applications is more often required of the traditionally trained school psychologist rather than extensive new coursework.

Two programs that follow a mental health orientation are worthy of note. Communities That Care (Hawkins, Catalano, & Associates, 1992) is a program that was developed for every person concerned about the healthy, drug-free development of our nation's children. The program is noteworthy inasmuch as it examines health promotion from the perspective of protective mechanisms and risk factors. Further, Communities That Care requires the active involvement of whole communities (mayors office, business leaders, police, health professionals, etc.). Its greatest asset is the bringing together of diverse community members with the common mission of making their community a protective environment for the healthy development of its young people.

Social Problem Solving and Social Decision-Making Project (SPS-SDM) has spread from a demonstration project to one that now includes hundreds of classrooms in nearly half of the states (Zins, Elias, Greenberg, & Weissberg, 2000). The original curriculum developed by Elias and Clabby (1989) was focused on classroom-based interventions in which school psychologists and teachers collaborated. The program was awarded the 1988 Lela Rowland Prevention Award and has been designated as a model program in the National Mental Health Association prevention Clearinghouse, the U.S. Department of Education, and the National Educational Goals Panel (Zins et al., 2000).

The core of the project is the building of social and emotional skills in elementary students. Students are taught self-control, group participation and social awareness, and a decision-making strategy that they can use when faced with difficult choices. The program has a strong prevention orientation, and the social and emotional components require students to integrate behaviors (actions), cognition (thinking), and emotions (feelings) to achieve specific goals. Examples of skills associated with social and emotional learning (SEL) include (Zins et al., 2000, p. 76):

1. Being aware of other's feelings
2. Accurately perceiving the perspectives of others (empathy)
3. Possessing assertiveness and a sense of self-efficacy
4. Ability to cooperate with others and resolve conflicts peacefully

In an attempt to help students develop the skills that a socially competent student might possess, the program has developed modules. Examples of these modules are (Zins et al., 2000, p. 89):

1. A program that allows students to create school and community service projects
2. A video program that shows children how to watch and analyze television programming and use their social decision making and problem solving skills to create their own programs, etc.
3. A "FIG TESPN" approach—an acronym for Feelings as a clue that a problem exists; *I* may have a problem; Goals to guide actions; *T*hinking of things to do; *E*nvisioning outcomes for each identified solution; *S*elect the best solution in relation to one's goal; *P*lan to implement; and *N*ext time will I do the same or try a different approach.

The program has been in existence for nearly two decades, and extensive research has documented the effects of the SPS-SDM program. Results of the studies that have been performed speak highly of the program. Data have shown that children, teachers, and other educators enjoy the program and put its principles to frequent use (Zins et al., 2000). Studies have been conducted in terms of pre-test to post-test gains where children involved in the program were compared with those children who did not participate. In general, examples of gains for children involved in the program include better transitions to middle school, increased self-esteem, and better social awareness (i.e., empathy) and social decision making.

Physical Activity and Diet

Health is a construct and is composed of many complementary behaviors. The separation of mind and body makes little sense to one serious about studying health. Yet, where does one start when organizing a health promotion program? If a community is knowledgeable and sees that health is a construct that includes physical, mental health/emotional, and spiritual components, then the starting point may not be a central question, and, as noted before, a comprehensive approach is best. However, we would argue that the safest point to start in most communities would be in the physical health and nutrition arenas.

David Satcher, U.S. Surgeon General, on March 15, 2000, argued what follows in the "Opinion" section of the *Atlanta Journal-Constitution*:

> I am alarmed by the steady trend we have seen over the last two decades toward decreasing physical education requirements in public schools... fewer schools require students to engage in physical activity at school... currently, no state mandates daily physical education in grades K–12, and participation by adolescents in grades 9-12 in daily physical education has declined dramatically... by about one-third, from 42 percent to 27 percent between 1991 and 1997... combined with an American diet that is too heavy on sweets and fats and too light on fruits and vegetables, have raised obesity to epidemic proportions in the United States.... We need to create environments where healthy lifestyles are as easy to adopt as unhealthy ones (p. A17).

Not surprisingly, children who participate in regular physical activity have more favorable cardiovascular disease risk factors than less active children. Saunders and Pate (2000) make the point that eating habits that begin in childhood contribute to a multitude of chronic diseases in adulthood (e.g., heart disease, cancer, and osteoporosis). Finally, numerous physical and nutritional policy statements call for lifetime physical activity and improved daily nutritional choices, and professional development for those involved in physical education and nutritional education.

Saunders and Pate (2000) identify the Child and Adolescent trial for Cardiovascular Health (CATCH) project as a model program to promote physical activity and healthful eating in a school setting. CATCH is implemented grades 3–5. Their food program (Eat Smart) focuses on reducing the fat and sodium content of food served. Their physical education component is geared to increase the amount of time that students engage in moderate to vigorous physical activity. The project also adds a home component to complement the classroom curricula. In a 3-year follow-up study, students in the intervention group maintained higher levels of physical activity and dietary intentions than those students in a nonequivalent control group.

Physical Focus and Physical Dimensions (2000) are curricula designed for sixth to eighth (Physical Focus) and ninth (Physical Dimensions) graders to promote knowledge and skills to enjoy a physically healthy lifestyle. Physical Focus centers on level of fitness, regular habits of physical activity, cooperative and competitive activities, and life-long skills. Physical Dimensions includes physical activity, diet, and a wellness component. An exciting element of the Physical Dimensions program is the High School Ph.D., a certificate of achievement given to graduates of the program.

Positive Youth Development

High rates of boredom, alienation, and disconnection from meaningful challenge are typically not signs of psychopathology, but rather signs of deficiency in positive youth development (Larson, 2000). Larson makes the argument that one could engage in a similar debate surrounding many cases of problem behavior, such as drug use, premature sexual activity, aggression, depression, and minor delinquency. Larson, as a developmental psychologist, finds the answers to the problems of today's youth more in an absence of a positive life trajectory than in the most common explanations of emotional disturbance, maladaptive cognitions, or as a response to family stress. The Carnegie Council on Adolescent Development (1992) has made positive youth development a hot term on the national scene, yet psychology has been slow to respond. Consistent with our negative focus on how "things go wrong" for youth, psychology has neglected the positive. Larson (2000), however, sees a diffuse body of research on the pathways whereby children and adolescents become motivated, directed, socially competent, compassionate, and take charge of their lives. Positive youth development is a movement that is enabling youth to explore these pathways.

Owing to a plethora of internal and external factors, most schools have also failed to respond to the challenge of the positive youth movement. As alluded to before, today's schools are so focused on the development of academic skills that health promotion and the benefits of extracurricular activity are often ignored. In 1990, the National Educational Longitudinal Study (see Zill, Nord, & Loomis, 1995) noted that the average tenth grade student spent less that one hour a week in an extracurricular activity (sports, music, art, drama clubs, as well as community service). While involvement in extracurricular activities has been clearly demonstrated as beneficial (Carns et al., 1995) in terms of reducing high-risk behaviors, and increasing academic success and building desirable character traits, its benefits are not being promoted or taken advantage of by a significant number of today's youth.

Children and adolescents are often out of school and home unsupervised by 3:00 p.m., and a number of problems have developed. By using juvenile crime rates as an example, the Federal Bureau of Investigation has found that the hours between 3:00 p.m. and 8:00 p.m. are the peak hours for violent juvenile crimes (Fox & Newman, 1997). As an alternative, Zill et al. (1995) have argued that participation in after-school programs can offer children and adolescents a vast number of skill- and character-building opportunities while diverting them away from delinquent behaviors. Thus, the need for after-school programming is clear and becomes a challenge for both schools and communities.

A community-based asset approach to building positive youth development is a joint project of Lutheran Brotherhood and the Division of Congregational Ministries of the Evangelical Lutheran Church in America. The Search Institute (2000) has identified 40 developmental assets that young people need to build to be healthy and successful. The assets are divided into two broad categories: external and internal. External assets are support (e.g., a caring neighborhood), empowerment (e.g., service to others), boundaries and expectations (e.g., positive adult role models), and constructive use of time (e.g., creative activities). Internal assets are commitment to learning (e.g., achievement motivation), positive values (i.e., promoting equality), social competencies (i.e., empathy), and positive identity (e.g., self-esteem). The focus of the program is to build these assets in a congregation, and yet extensive interaction with one's community is encouraged.

The Search Institute makes a convincing case that assets make a difference. Having collected data from almost 100,000 sixth to twelfth grade public school students in 213 towns and cities in 25 states, it is evident that patterns of risk-taking behavior and positive behaviors and attitudes are altered by the number of assets that youth report. For example, youth that report only 0–10 assets have the highest rates of illicit drug use, rates of violent behavior, and depression/suicide attempts. Conversely, students reporting 31–40 assets, have the lowest rates of illicit drug use, aggressive behavior, and rate of depression/suicide attempts. In terms of positive behaviors and attitudes, the findings again strongly favor those youths reporting the greatest number of assets. For example, the more assets, the more likely the youth is to help others, earn high grades in school, maintain good health habits, and value diversity.

The final project to be addressed in this chapter is a more scientific approach to positive youth development. Larson (2000) believes that *initiative* is a core requirement for other positive components of development, such as health choices, leadership, altruism, and civic engagement. Today, images of adult careers do not have enough magnetic pull, in and of themselves, to motivate most youth to begin taking control of their lives. Further, given that the future of many occupations is unstable (many may not exist in 20 years), it is better that youth are motivated by initiative than by anticipated long-term rewards.

Initiative is the dedication of cumulative effort over time to achieve a goal (Larson, 2000) and is composed of three elements. Initiative involves *intrinsic motivation* or wanting to do an activity and being invested in it. Second, a *concerted engagement* or thought and effort toward creating some form of order, synergy, etc., in the environment is required. Third, initiative involves a *temporal arc of effort* or the capacity to re-evaluate and adjust strategies. Larson notes that to become an agentic adult (a person capable of being an agent of change), one needs to be able to mobilize one's attention, one's mental powers, on a deliberate course of action, without being deterred by the first obstacle one encounters. He later further summarizes these terms as intrinsic motivation, concentration, and challenge.

Larson confirms that the great majority of adolescents' time is spent in two opposite experiential domains. In school, they experience concentration and challenge without being intrinsically motivated. In most leisure activities, including watching television, they report experiencing intrinsic motivation but a lack in concentration and challenge. An exception is what he terms structured voluntary activities, including youth organizations and extracurricular activities. The defining criteria for voluntary structured activities were those with rules, constraints, goals, and activities where the youth were highly motivated to be involved. Sports, arts, music, hobbies, and participation in organizations were all perceived as involving high intrinsic motivation, concentration, and challenge. Larson concludes that such activities are critical to positive youth development.

In addition to the development of initiative, Larson reviews a range of research to confirm that structured voluntary activities are associated with multiple positive outcomes including diminished delinquency, greater achievement, and increased self-control and self-efficacy. Next, he reviews research by Heath (1999) that has recorded language use and has found that adolescents participating in structured voluntary activities acquire a new operating language of agency that reflected an increased ability to affect the world. For example, when the youth first joined a structured voluntary activity their statements included little conjecture about future events and a passive and self-defensive orientation that viewed acts of initiative as doomed to failure. Within four weeks, language use that reflected skills to think about the world as a field of action increased.

Larson's research and his review of the research of cohorts examining structured voluntary activities paints a positive picture of early adolescents that are awake, alive, and open to developmental experiences less common in other parts of their lives. He believes that the agentic states developed by voluntary structured activities make for a fertile ground for adolescents to develop and teach themselves a wide variety of positive health competencies. Our challenge is to help find those activities that contain the elements of intrinsic motivation, concentration, and challenge and expose youth to these elements. A further challenge will be to find ways to incorporate those elements into a school health curriculum that will send today's youth toward a future of spiritual, mental/emotional health, and physical health.

SUMMARY

Today's youth are grossly underserved in almost every arena of health promotion. When a decision is made to support an "academic" area or remedial program versus a health area, the health area is far too often the loser. Yet, research demonstrates that we are approaching a time when emotional, physical, social, and spiritual health of our youth is arguably more important than basic cognitive skills and far more cost effective than remedial programming. Children of today are more at-risk and self-report more emotional problems, delinquency, and problem behaviors than the reports of youth from previous generations. The good news is that solutions do exist, and yet the described solutions will require significant changes in our current practice.

In this chapter we have defined health and demonstrated its manifestations. We have explored the present status of health promotion and have offered numerous models for change. In our review we have found that integrative, comprehensive, and primary school level programs are best and that preventative efforts are vastly preferred over reactive or remedial efforts. Schorr (1997) cautions that even highly successful programs cannot be transplanted wholesale from one setting to another and be expected to work. Needs for health promotion must be defined by the local population. Minke (2000) notes that this does not mean, "reinventing the wheel." A number of excellent programs do exist, and their mission statements and/or theoretical orientations are clear. Find the program or philosophy that may work in your school and community. Network with teachers, parents, principals, and community agencies that are committed to implementing a health promotion program in your school or community. Together, envision what comprehensive school health education can be and bring it to fruition.

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Chapter in an earlier NASP publication that focuses on the full spectrum of health-related issues that affect our children. Their definition of health promotion remains the standard. They convincingly argue that our current system is not working effectively and that school psychologists must play a central role in reducing the many health risks faced by today's youth.

61 Best Practices in Developing Exemplary Mental Health Programs in Schools

Kathy Pluymert
West Dundee, IL

OVERVIEW

The need for school-based mental health services has become increasingly apparent in recent years. As school communities, parents, policy makers, and the media have examined factors that may account for incidents in which a crisis has occurred in a school setting, a recurring theme has been the mental health needs of the students involved. High-profile crisis situations are dramatic illustrations of the struggles that school communities encounter daily in trying to help students succeed in school in the face of sometimes overwhelmingly complex personal and social difficulties.

In some situations, a high-profile incident that captures the media spotlight or a crisis in its own community is what propels the school to develop programs to address the mental health needs of students. In the wake of a crisis, members of the community are searching for ways to prevent those kinds of tragedies from ever happening again. The Chinese symbol for crisis, which includes elements of both danger and opportunity, illustrates the challenge to school communities, and to the profession of school psychology in these situations. Members of the National Association of School Psychologists (NASP) National Emergency Assistance Team observed, "Crisis has been frequently recognized as a time of potential danger as well as potential opportunity.... If our profession is able to manage the danger—that is, manage the immediate crisis and quickly return the system to normal functioning—then there exists a tremendous opportunity to stimulate long-term systemic change. Once seen as effective and credible, the psychologist has infinitely more opportunity to move the system in the direction of prevention" (Poland, Pitcher, & Lazarus, 1995, p.446).

While tragic situations may sometimes be the impetus for developing school-based mental health programs, there is a growing body of compelling evidence in our society of the importance of addressing mental health needs of children. Demographic information collected by a host of private and government agencies clearly demonstrate the need for interventions and systematic approaches designed to address child and adolescent mental health needs. Statistics related to poverty, family disintegration, violence, and substance abuse are staggering indicators related to the lack of supportive families and economic resources needed for learning and school success (Knoff, 1996; U.S. Department of Health and Human Services, 1999). These barriers to learning (Adelman, 1996) are a growing concern in our society.

School psychologists can be an outstanding resource to the school community in the development of effective mental health services to address the needs of students and families. The challenge lies in providing excellent service in a crisis and also on a day-to-day basis in the routine matters and small crises that builds the credibility of the school psychologists within the school community.

Providing mental health services, such as group and individual counseling and mental health evaluations, have been a part of school psychological training and professional practice throughout the history of the profession. More recently, a growing body of literature that addresses the role of school psychologists as mental health service providers has emerged. Both literature and practice show that school psychologists are providing mental health services across the spectrum from prevention to treatment. These services can be found on a small scale in a single school and in complex exemplary school-based mental health programs that integrate the services of the school, community agencies, hospitals, and universities (Nastasi, Varjas, Bernstein, & Pluymert, 1998).

There is an increasing level of awareness among mental health professionals across sub-specialties that schools are a logical place for the delivery of mental health services to children and youth. Mental health services offered to students in school settings is a common sense service delivery option because children and youth are required to be in school. Providing mental health services in the school setting affords some excellent solutions to problems that families have in accessing mental health services, including problems with transportation and financial resources needed to obtain these services in the community (Dryfoos, 1994). As Knoff and Batsche (1990) point out, schools also provide excellent settings in which to identify and treat students with mental health needs as the school setting provides many opportunities to integrate and monitor treatments across home, school, and community settings.

Mental health services within school settings have the distinct advantage of presenting an ecologically realistic setting in which interventions can be readily integrated into students' daily activities. This integration allows for opportunities for students to generalize behaviors and skills learned in therapeutic sessions into their daily routines, allowing for greater integrity in their overall functioning (Jackson & Bernauer, 1975). In addition, mental health professionals who work with students in school settings can, in collaboration with teachers, recommend and evaluate the effects of modifications to the classroom environment. It might also be possible to modify the expectations and attitudes of school personnel through consultation, providing data about the student's needs and learning styles, and modeling.

There is an increasing awareness of the value of school settings as important in meeting the mental health needs of children and youth. Many mental health professionals, who 15 years ago would not have considered providing services in schools, are now very interested in school-based mental health because of the benefits to children and disenchantment with more traditional forms of mental health service delivery systems for children (Waxman & Weist, 1999). In addition to the benefits to students of providing mental health services in schools, there are other economic and professional factors that serve to draw professionals previously serving in private practice and clinical settings to the school. The advent of managed care and subsequently limited or reduced funding for mental health services to hospitals and private practices have also resulted in the schools now being perceived as an attractive practice setting to mental health professionals and psychologists of other specializations (Bricklin et al., 1994; Short & Talley, 1997). Unfortunately, many of these professionals have minimal training and experience in working with children and little familiarity with school settings. While there is some acknowledgment among psychologists that there is a specialized set of competencies in school practice (Kubiszyn, 1999), the future of school-based mental health services will likely be much more a matter of well–conceived and collaboratively implemented mental health services delivered in the schools by a group of mental health specialists across disciplines.

From the perspective of both child and professional advocacy, it is vital that school psychologists become proactive in promoting their role as mental health service providers and in the development of exemplary mental health programs in schools (Dwyer, 1996; Gutkin, 1995). Realistically, professionals who are the most versatile, who can provide the most valued and cost-effective services to the district, and who are able to demonstrate the efficacy of their services to decision makers are those who will be asked to serve the school community, without regard to an individual's training or title.

Given the need for school psychologists to be increasingly proactive in the development of exemplary school-based mental health programs and services, the purpose of this chapter is twofold. First, to serve as an introduction to the practitioner on the resources and literature available that describes school-based and school-linked mental health services and programs currently in school settings. The second purpose of the chapter is to provide practical strategies that school psychologists can use to develop an approach integrating mental health services and programming into their own school community to address the unique needs of the local educational agency they serve.

BASIC CONSIDERATIONS

Before a school psychologist can begin to develop a school-based mental health program, there are a number of factors that the practitioner needs to be cognizant of to maximize the likelihood of the long-term success of a program and to minimize frustration and road blocks to the process. These factors include: (a) building a foundation of credibility and trust within the district, (b) knowing how the school functions as a system and understanding its unique needs, (c) building coalitions and networks for comprehensive and coordinated service delivery options, and (d) becoming well prepared to plan, implement, and evaluate the services and/or program. If the practitioner attends to each of these factors, then the program has a much greater chance of institutionalization. That is, the program will be accepted, implemented as designed, integrated, and valued by the school and community and will survive challenges that will come in the form of changes in staffing patterns, funding, and leadership/administration within the system.

Build a Strong Foundation of Trust

One of the questions most frequently asked by school psychology practitioners is, "How can I get my supervisor/principal/school district to let me provide mental health services? It's not part of my job description." The answer to that question is twofold and has to do with providing excellent services and being willing to take a risk to go beyond the stated job description. The most effective advocates for the profession of school psychology are skilled in two ways. First, they are caring, competent school psychologists who provide excellent forward-thinking services to children and the school community. Second, they are skilled in demonstrating the value of their services to the system in which they work and actively do things to build positive relationships with others. It is vitally important that school psychologists raise their visibility in the school community in which they work, because increased visibility can lead to increased opportunities to expand their role and to serve children.

There are several excellent resources that practitioners can use to become intentional about building positive relationships and developing communications activities that will serve to illustrate the value of their services to the school community. For example, NASP members can access several resources from a NASP manual entitled, *Practical Strategies to Expand Services to Children and Families* (Thomas, Pluymert, & Armistead, 1998). This manual includes examples of communications activities such as model newsletter articles, samples of letters, and prepared presentations (including overheads) that can be used as they are or modified to suit the needs of the individual practitioner. As school psychologists use these kinds of communications activities to educate decision makers in the community about their expertise and knowledge base in key areas of mental health service delivery, the better their position will be as new opportunities present themselves. In addition to purposeful communications activities, school psychologists need to make purposeful positive personal contacts with decision makers. It is important not to underestimate these contacts (Curtis & Stollar, 1995).

For example, one school psychologist began by regularly scheduling only 15 minutes each week to talk with the building principal about building-level issues. After a few weeks of such talks, an interesting journal article related to one of the issues discussed would occasionally be given to the principal. Over time, the school psychologist came to be viewed by the principal as a source of information and expertise regarding a broader range of issues, particularly as they pertained to organizational concerns (p. 55).

Understand the School Community as a System and Know What the Community Needs

The long-term success of school-based mental health programming depends largely on the program becoming integrated into and valued by the system. To achieve the goal of institutionalization of mental health programs, it is critically important to attend to systems issues and needs assessment in the development, implementation, and evaluation of these programs.

DEVELOPING A SYSTEMS ORIENTATION

Curtis and Stollar (1995) offer the following definition of a systems orientation: "a systems perspective involves the ability to understand the reciprocal influence that the various parts of a system, the system itself, and the surrounding system or environment exert on one another" (p.52). When considering the development, implementation, and evaluation of mental health programs, a systems perspective is important for several reasons. One of these is that implementing mental health programs in schools is essentially a form of system-level consultation. A problem-solving approach, collaboration, and systematic planning are critical skills that a practitioner needs to develop mental health services in school settings. Another reason that a systems perspective is vital is that reciprocal effects of the multiple facets involved in mental health programming need to be considered. Factors such as the effects of family environment, the school, and the community on the students, as well as the impact that students have on their respective environments, are important considerations (Meyers & Nastasi, 1999). Including active participation of key individuals who are decision makers, influential in the community, and determine access to financial resources as well as any group that will be involved in the program (or affected by it) is also vital if the program is to be valued and supported by the system. The reader is referred to the chapter on system-level consultation in this volume for further information about these important skills.

CONDUCTING A NEEDS ASSESSMENT

If a mental health program is to be successful, then it is essential that the program be tailored to the unique needs of the school community, students, and families it is designed to serve. The practitioner needs to look for a convergence of information from a variety of sources to establish the real and perceived needs within the school community from a variety of perspectives. There are several needs assessment methods that can be used to gather this kind of critical information. School psychologists have a natural source of information in the kinds of referrals that are a part of their work in the school system. An analysis of formal and informal referrals for consultation services, problem-solving meetings, pre-referral intervention team meetings, case study evaluations, or "hallway consultation" provide a rich source of information about needs in the community. By keeping track of referrals, case load, and investigating the records of building-level team meetings, from Teacher Assistance Teams to multidisciplinary staff conferences, a pattern of needs will emerge. Information from disciplinary referrals, suspensions, and expulsions will add a substantial amount of information available if it is compiled and analyzed carefully. Data can also be collected from community-based or county resources such as the Department of Corrections, Department of Health, and Social Services. The data about rates of violent crimes, juvenile arrests, substance abuse, adjudicated youth, and teen pregnancy are important information about student mental health needs and assist the psychologist in developing the perspective of the school as a part of a larger community.

Additional perspectives can be gained through interviews with parents, policy makers, and other important decision makers in the school community. Those interviews can be informal conversations, formal structured interviews, or in focus groups. The interviews serve not only to provide information, but to demonstrate that the school psychologist is interested in building collaborative relationships. The field of school-based mental health service is changing and developing at a pace somewhat faster than educators typically proceed, which can lead to some resistance. Be sensitive to this during the interviews. Another factor to consider is that there are groups that object strenuously to mental health services delivered in schools (Evans, 1999), and their perspectives also need to be attended to in the development of school-based services.

Finally, surveys can provide a concrete form of gathering information about both real and perceived needs through collecting specific system-level data and attitudinal information from members of the school community. Nagle (1995) provides an excellent overview of needs assessment techniques for school psychologists that could be used to gather the information needed for mental health program development.

Build Coalitions and Networks for Comprehensive and Coordinated Services

Given that programs and services for children and adolescents are provided by a variety of sources, it is common for any individual child to be served by multiple agencies and service providers within the community that are not in communication with each other. To address the problems of streamlining and increasing the efficacy of mental health services, the current watchwords are "coordinated and integrated services" (Bickman & Rog, 1995). Schools provide an excellent setting for collaboration and coordination of services for children and youths. Schools can serve several functions including complement services of outside agencies, serve as a catalyst to coordinate services, and develop programs to improve and expand services delivered in the school setting (Adelman, 1996). As Conoley & Conoley (1991) observed, the nature of referrals and range of presenting problem behaviors are the same for school-based and clinic-based psychologists. Through working together, school, clinic, hospital, and community agency-based mental health practitioners may have the opportunity to improve treatment outcomes by coordinating interventions across the home and school settings.

The development of comprehensive and coordinated mental health service delivery models requires that school psychologists be well acquainted with the services and agencies already available within the community. School psychologists need to know which community agencies, parent and family support groups, and private providers (including pediatricians and pediatric specialists) exist in the community and what functions those agencies and groups provide to students and families. It is also important to begin to build relationships with those groups to open the door to further communication during the planning, implementation, and evaluation of school-based or school-linked mental health services and programs. Getting to know community resources is not only a form of needs assessment, but it is an important aspect of program development through coalition building. Child advocacy and coordination of services require that school psychologists do this kind of networking in serving individual students. Similarly, coordination and coalition building is needed when developing services for the school community. Look for ways in which the needs of children, teens, and families are being met in the community. Conversely, look for unmet needs and ways that existing programs and services could be improved.

Do Your Homework on Effective Mental Health Services

The Scouting motto "be prepared" offers wise counsel to school psychologists who are working to establish or expand mental health services in school settings. Once the practitioner gets a sense of the needs of the students and the school community served in his or her local education agency, and understands the existing supports and services available, it is critical to begin to investigate effective practices, service delivery systems, and programs that work. While there is merit in creative approaches and innovative programs, the stakes for children and families who have significant mental health needs are high. The field of mental health services has evolved to the point where there is an extensive body of evidence about effective interventions and programs to address the mental health needs of students and families that yield good outcomes (Hoagwood & Erwin, 1997).

The literature of school-based and school-linked mental health has grown tremendously in the last decade, with good material added regularly. It is difficult to recommend one book or journal over another, since there are many equally good sources from which to choose. However, for a good basic orientation to the literature in school-based mental health services, the brief annotated bibliography and list of references at the end of this chapter can serve as a good starting point. The annotated bibliography was chosen to give an overview of some of the theory and practice in school-based mental health with an emphasis on literature outside of material that a typical school psychologist practitioner might read. For information about specific kinds of programs, for example, to address suicide prevention, or crisis intervention, in addition to the resources in this volume, conduct a literature review by using ERIC, PSYCHINFO, or other similar databases, many of which can be accessed on-line though a school or university library. The information gained through literature review will provide invaluable information about how to design, implement, and evaluate a program or service, and will provide a kind of benchmark, and perhaps rationale, to use as a pattern. This is also an important consideration in funding, because many funding sources may require the replication of an existing program model.

One good resource to obtain information about existing mental health programs is Nastasi, Varjas, Bernstein, and Pluymert (1997). Nastasi et al. (1997) includes information about many programs across the United States. An example of one frequently cited model developed by school psychologists is Project ACHIEVE. A program description can be found in

Knoff and Batsche (1995). Finally, there are several agencies or organizations that can be accessed via the Internet that have information about school-based mental health programs. In addition to NASP's National Mental Health and Education Center for Children and Families, the American Institute for Research, School Mental Health Project/Center for Mental Health in Schools (University of California, Los Angeles), and the Center for School Mental Health Assistance (University of Maryland School of Medicine) have excellent resources. Another resource includes a multi-million dollar grant program funded by the U.S. Department of Education that was designed to address reduction of school violence through a collaborative school- and community-based mental health program. Obtaining a grant from these funds, The National Mental Health Association and NASP, working together with several other agencies, developed a network of school-based mental health programs called, "Safe Schools/ Healthy Students Initiative." This initiative provided many exemplary comprehensive and coordinated school and community mental health programs for a 3-year period, beginning in 1999, and provides examples of many good model programs.

BEST PRACTICES

There are many excellent program models, theories, and best practices in mental health services for children and families. What follows is a summary of a consensus of opinions and theoretical and practical considerations in developing, implementing, and evaluating an exemplary mental health program. The following factors are important best practices in the process: (a) attend carefully to characteristics of exemplary programs (b) choose well-documented models and/or empirically validated interventions, (c) pay close attention to legal considerations, (d) develop a blended funding base, and (e) complete program evaluation and use the data to further develop the program and to promote the program in the school community.

Characteristics of Exemplary Mental Health Programs

According to Nastasi et al. (1997) , there are six hallmarks of exemplary mental health programs:

1. Programming reflects an integration of theory, research, and practice.

2. Programming is framed within an ecological-developmental theoretical model.

3. Program development, implementation, and evaluation reflect a collaborative/ participatory model.

4. A continuum of mental health services is provided, ranging from prevention to treatment.

5. Program evaluation address program acceptability, integrity, and effectiveness.

6. A school psychologist is involved in one or more aspects of mental health programming.

What follows is a summary of the description of each of these factors from Nastasi et al. (1997).

INTEGRATION OF THEORY, RESEARCH, AND PRACTICE

If a mental health program is to be exemplary, it is essential that there be an integration of relevant theory and research, and application of these into the daily workings of the program. This process is a cycle of learning, planning, implementing, and evaluating practice in light of developing theory, results of evaluation and related research, and subsequent modification of practice. This collaborative action research approach (Meyers & Nastasi, 1999) is a reciprocal process in which research and theory affect practice and the results and application in practice inform further research and is in itself a way of building theory. Nastasi et al. (1997) note that this approach to program development, implementation, and evaluation is consistent with most school psychologist practitioners' training as scientist-practitioners and offers a promising model for integrating the roles of school psychologists that sometimes appear disparate. "That is, an action research model provides the framework for integrating assessment, intervention, consultation, and research. Ideally, this integration also fosters engagement in and dissemination of research by practitioners" (p. 4). The work that a school psychologist has completed in literature review and investigating model programs and empirically supported interventions will provide a good working foundation for accomplishing this aspect of program development.

ECOLOGICAL-DEVELOPMENTAL MODEL

If a program is to be exemplary, then it is vital that the program meet the needs of the system and the needs of the individuals within the system. In the ecological-developmental model, development is considered to be a progressive and mutual adaptation of the environment and of the individual. Nastasi et al. (1997) states, "... in order to understand and/or change human behavior, one must attend to the ecological contexts in which the individual is socialized (e.g., school, family, community) as well as the interaction of those contexts (e.g. parent-teacher interaction). Furthermore, the individual plays an active role in development, such that one's personal qualities and behavior engender certain interactions with the environment" (p. 5). The background work that the school psychologist has done in systems analysis and needs assessment as described earlier in this chapter should provide a good foundation for looking into these reciprocal factors in program development, implementation, and evaluation. Look carefully at points of interaction and reciprocal influence in the context of the program and services.

COLLABORATIVE/PARTICIPATORY MODEL

It is essential that the process of designing, implementing, and evaluating the program is a model of collaboration between the program planning team, stakeholder groups, and decision makers and that each of these groups is involved as members of the team. This approach is consistent with school psychologists training in collaborative consultation and problem solving, applied here to a system. This model is also consistent with school reform efforts and best practice with regard to coordinated and integrated service delivery. Collaboration and coalition building is not easy due to inevitable conflicts in different organizations' conceptualization of their roles, conflicts about professional turf issues, potential competition for funding, and other more personal power and control issues. However, without these potentially political negotiations, comprehensive and coordinated services for students and their families will not occur. Adelman (1996) and Knoff (1996) suggest that school psychologists are possible organizational facilitators who can coordinate collaboration across agencies and between schools, families, and community agencies. These collaborative efforts and participatory management approaches are likely to ensure that the program attends to cultural factors, empowers members of stakeholder groups, and facilitates the process of institutionalizing the program (Nastasi et al., 1997).

CONTINUUM OF SERVICES

Comprehensive and coordinated mental health services require a broad-based model ranging from prevention programs targeted to the regular classroom to treatment services for individuals with moderate to severe mental health problems. The services vary on a continuum across several factors including population served, referral processes, context for service provision, and staffing requirements. Nastasi et al. (1997) propose four levels of intervention: prevention, risk reduction, early intervention, and treatment:

Level I : Prevention. Prevention services are targeted toward the general populations. They focus on fostering individual development and creating supportive social environments. All students receive this level of intervention that is delivered in the context of an intact group such as the classroom. Examples of these kinds of services include those in which personal-social goals regarding issues such as substance abuse are integrated into the academic curriculum.

Level II: Risk Reduction. Risk reduction services are targeted toward high risk population. These services focus on building competence, teaching coping skills, and modifying social context in which risky behaviors might occur. Students might self-select into this level of service delivery, which would typically be delivered in the context of a small group. An example of this level of service might include support groups for children of alcoholics.

Level III: Early Interventions. Early intervention services are targeted toward individuals with mild adjustment problems and are designed to treat mild adjustment problems, reduce the risk of more severe problems, and modify the context in which the problem behaviors manifest themselves to affect individual adjustment. Students might be referred for early intervention services though screening and/or referral. Services are typically delivered in individual or small group formats. An example of early intervention service is a counseling group for students experiencing mild depression.

Level IV: Treatment. This most intensive level of service delivery targets individuals with moderate to severe emotional disturbance and/or mental health needs. Service focuses on treating identified mental health problems and modifying context to effect the individual's functioning. Students would likely be referred and selected for this level of service through diagnosis by a mental health professional. Direct services are typically delivered in individual or small group contexts by mental health professionals.

MODEL OF EVALUATION

Program evaluation is a critical component of mental health services and programs delivered in school settings, which too often is not thoughtfully integrated into program development from the beginning. As illustrated earlier in the discussion about integrating theory, research, and practice, data from program evaluation informs both practice and theory and offers a defensible rationale for program implementation. Nastasi asserts that in order for program evaluation to be complete enough to assess key factors in service delivery and to inform practice, three key elements of program evaluation need to be included in the process.

The first is *acceptability*, which considers the participants' (both recipients and facilitators) perceptions and attitudes about the program's feasibility, efficacy, usefulness, and whether or not the program is consistent with their own world views. Examples of methods for assessing program acceptability include interviews, focus groups, questionnaires, and examining journals.

The second component is *integrity*, which looks at whether or not the program is implemented as designed. One component of this would be to document variations in program implementation by different facilitators or with various recipients to identify modifications needed in how the program is delivered or to address staff development and training issues. Examples of techniques to assess program integrity would be activity logs, observations, interviews, self-evaluation measures, and journals.

The third component is program *efficacy*, which examines program outcomes. This aspect of program evaluation measures the extent to which the program and services meet their stated goals and objectives. It also evaluates unintended program outcomes. Measures of program efficacy might include observation, interviews, self-report measures, rating scales, analog measures, and curriculum-based evaluation measures.

Choose Well-Documented Models and Empirically Validated Interventions

After completing the literature review and examination of programs during the preparation described earlier in this chapter, it is important to carefully examine the models available keeping two important factors in mind. First, is the information provided in light of the proposed model program's outcome and other evaluation data of high quality? Does the program provide outcome data and information about consumer satisfaction? Second, look at the match between your community and the students you serve and the demographic and organizational data reported by the programs you are investigating. There does not have to be a match, but sometimes settings and resources available can have an impact on program outcomes and consumers' perceptions of the efficacy of the program (Pluymert, 2000). A carefully chosen program model with a proven track record assists the practitioner in that the model is defensible on the basis of a track record of research. Practitioners will want to talk with individuals who are implementing the program and with the program originator or author, if possible. The advice and mentoring available in consulting with other professionals who are already immersed in the program that is under consideration can be a tremendous asset to a practitioner who is learning a new set of skills.

Legal Considerations

It is important to implement best legal practices when developing a mental health program in the school setting. Several aspects of law need to be carefully attended to including confidentiality, consent, and, when including students under entitlement provisions, IDEA regulations. It is also important to investigate state law and regulations with regard to mental health services, because consent and confidentiality in matters of mental health services are often different from those within IDEA and other applicable regulations.

Evans (1999) offers a review of the various aspects of consent for school-based mental health services. Consent is sometimes interpreted within the school setting as passive consent. In other words, parents are informed that they have access to information about mental health services and the fact that they have the right to object if they choose to do so. This is often the mechanism that is used for sex education and some prevention programs offered in the school setting. However, it may be best practice to take a more conservative approach and to obtain parental consent for students who will be receiving mental health services at school. Evans argues that there is a significant difference in the concept of consent for a school versus a clinic setting for mental health services. Parents do not send their children to school with the expectation that they will be receiving mental health services. Informed consent is important to protect the rights of the child, the parent, and the practitioner. Without parental consent, Evans warns, the practitioner is exposed to considerable potential liability.

The issue of confidentiality in school-based mental health services should be dealt with carefully in light of professional responsibilities such as duty to warn, typically confronting the school psychologist in the delivery of any mental health services in school settings. A confounding factor for confidentiality emerges because there is increasing collaboration between agencies and professionals to provide mental health services. Finally, as funding sources such as Medicaid and managed care companies become involved in school-based mental health services provisions, confidentiality becomes a consideration with regard to caps on a student's available future coverage, given services that might be provided in the school setting.

Finally, there are several aspects of IDEA that the practitioner needs to keep in mind when developing mental health services in the schools. Schacht and Hanson (1999) provide an overview of case law from across the country that highlights some of the legal aspects of school-based mental health services under IDEA. The authors highlight factors that have an impact on the development of programs and services, including the difference between a student having a DSM-IV diagnosis and the presence of a disability, the difference between incidents of student misconduct and the presence of a disability, least restrictive environments for service delivery, and mental health services as a related service for students who are entitled to special education services.

Develop a Blended Funding Base

One of the factors that contributes more than almost any other factor in the demise of mental health services and programs is discontinuation of the funding source. While school administrators value school-based mental health services, they are generally not equally enthusiastic about the school's responsibility for providing those services (Pluymert, 2000). If a program is going to go the distance over time in serving students and the school community, then it is important to look to a variety of funding sources for the program. There are many sources to investigate for funding mental health programs.

Nastasi et al. (1997) found the following funding patterns among the 103 programs included in the study:

1. 56% of the programs relied on multiple funding sources

2. 52% of the programs received funding from external grants

3. 64% of the programs were funded by schools, with 37% of these using special education funds and 32% funded as non–special education support services

4. 23% relied on Medicaid funds

5. 11% received funds from health insurance companies or HMO's, and 7% were linked to school-based health clinics.

6. 11% were funded by private agencies

7. 37% of the programs relied on some other source of funds

Several of the programs were volunteer efforts under the leadership of school psychologists, and one school psychologist stated that she personally "scrounged for funds." An interesting resource for the practitioner is a book written by a school administrator that retells her experiences in establishing school-based mental health services in her community (Hoover & Achilles, 1996).

Grant dollars through federal agencies, private industry or foundations are a good source of funding, but can also be risky over time as a program that depends heavily on grant monies can be devastated if the grant dollars are time-limited or dependent on the will of federal or state legislators. There are publications and on-line resources available to investigate grant possibilities, but the practitioner needs to be careful to use grant funding in conjunction with other more stable funding sources. Collaboration with other mental health agencies and with community and with parent groups can be a helpful source of both financial and human resources.

Sometimes the most valuable commodity is not dollars, but committed volunteers who receive support and training through the mental health professionals in the program. The inclusion of volunteer support is a good use of resources and also builds a sense of ownership that is an important factor in the institutionalization process. This concept can also be extended to in-kind donations of materials, space, and services that can be obtained from individuals, small businesses, and agencies.

Use Program Evaluation Data to Maximize Benefits to the Program

It is critical to complete program evaluation and to make the results of the program evaluation useful information for further program development, providing information about the program to constituent groups. Program evaluation is an important part of the school psychologist's role as scientist-practitioner, gathering and utilizing data to validate and potentially improve services. These are practices that may not be considered a priority in the light of the urgent matters of daily practice, but they are critical elements in best practice and in the program's ability to provide accountability and to promote its good work to the community.

Nastasi et al. (1997) found that of the 103 programs, most addressed program acceptability (79%), program integrity (66%), and program efficacy (80%). Forty-three percent reported that they conducted follow-up evaluations. Only 42% reported having any results available in writing, and only a handful of these programs actually provided written data after repeated requests.

The importance of program evaluation from a theoretical and program improvement perspective is clear. Without collecting data in a systematic fashion as was discussed earlier, the practitioner is reliant upon making decisions about services for children and youth absent any reliable benchmarks. There is a changing paradigm for service delivery in school psychology such that practitioners are increasingly utilizing resources such as curriculum-based evaluation (Howell & Nolet, 2000) for assessing and creating interventions for social behaviors. As this level of accountability becomes the standard for educational and psychological service delivery to individuals in the schools, mental health services and programs should be held to the same standard.

Program evaluation is not only required from a professional best practice standard, but funding sources and constituent support also call for the practitioner to produce data that demonstrate the efficacy of the program. Much of the excitement and good will generated around the creation of a program can be sustained through the use of data that demonstrate the positive outcomes of the program to the benefit of the community. Many of the communications activities described earlier, such as letters and presentations to community groups and decision makers, reports to constituent groups, articles written for local publications, and press releases, are good mechanisms for spreading the good word about the value of the program, as well as generating interest and support in the community for the important work of the program.

SUMMARY

The need for school-based mental health services has become increasingly apparent in recent years. School psychologists can be an outstanding resource to the school community in the development of effective mental health services to address the needs of students and families that they serve. From the perspective of both child and professional advocacy, it is vital that school psychologists become proactive in promoting their role as mental health service providers and in the development of exemplary mental health programs in schools.

Before a school psychologist can begin to develop a school-based mental health program, there are a number of factors that the practitioner needs to be cognizant of to maximize the likelihood of the long-term success of a program and to minimize frustration and roadblocks to the process. To have the opportunity to develop mental health programming in the school, many practitioners will find that their first priority is to build a foundation of credibility and trust within the district by providing excellent services in the day-to-day events and the crises that occur, and by promoting the value of the work they do through the use of communications activities. A second key to developing a successful mental health program is knowing how the school functions as a system and understanding its unique needs. The school psychologist will need to utilize systems consultation and needs assessment skills to serve as a catalyst for change. Third, the practitioner will need to actively build coalitions and networks for comprehensive and coordinated service delivery options. In addition, the school psychologist will need to become well prepared to plan, implement, and evaluate the service and/or program through research of the literature and a review of empirically supported interventions and existing program models that are well supported and show evidence of positive outcomes for students. If the practitioner attends to each of these factors, then the program has a much greater chance of institutionalization.

When the school psychologist is ready to approach program development, implementation, and evaluation, specific factors should be considered to facilitate the success of the program. Characteristics of exemplary mental health programs are incorporated in the program including theory-research-practice integration; an ecological-developmental approach; collaborative-participatory model; the provision of a continuum of mental health services; program evaluation that addresses program acceptability, integrity and efficacy; and the involvement of a school psychologist. Finally, the practitioner needs to ensure that exemplary programs attend to best practices in program development, implementation, and evaluation including choosing well-documented models and/or empirically validated interventions; giving close attention to legal considerations; developing a blended funding base; and completing program evaluation, utilizing the data to further develop the program and to promote it in the school community.

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62 Best Practices in School Discipline

George G. Bear
Albert R. Cavalier
Maureen A. Manning
University of Delaware

OVERVIEW

Throughout the history of American education, school discipline has remained a primary concern among educators and the general public. As seen in the 32nd annual Phi Delta Kappa/Gallup Poll of the Public's Attitudes Toward the Public Schools (Rose & Gallup, 2000), a general "lack of discipline" is viewed by the public as the second biggest problem in public schools. "Fighting/violence/gangs," which are more specific and serious forms of discipline problems, are viewed as the fourth biggest problem. The 2000 poll also found that the public believes that the foremost purpose of public schools is "to prepare people to become responsible citizens." Although participants were not asked how educators could best achieve this goal, they were asked if they supported the use of harsh measures for those who fail to act responsibly, specifically in cases involving weapons. Results showed that 87% favor zero tolerance policies in schools.

The above results illustrate the conflicting views that parents and educators have had of school discipline over the years. That is, they have always recognized that the primary aim of education is to develop responsible citizenship, or self-discipline. At the same time, however, they have strongly supported the external use of discipline in order to maintain school environments that are safe, orderly, and conducive to learning. Over the course of American history various strategies and programs, both effective and ineffective, have been used in attempts to achieve both of these aims. Indeed, as seen below, many of the strategies used in the past to promote self-discipline and to maintain order and safety remain popular today. Thus, as one should expect, many of the debates and controversies over their use are not new to education, or to school psychology. This would include debates and controversies over corporal punishment, suspension, expulsion, the systematic use of extrinsic rewards, the placement of disruptive students in alternative education and special education settings, and the effectiveness of strategies and programs designed to promote social and emotional development.

A Brief History of School Discipline: The Shifting Importance of Prevention, Correction, and Remediation

Before the twentieth century, it was believed that self-discipline was best learned through the memorization of moral teachings based primarily on the Bible (McClellan, 1999). In addition to moral knowledge, parents and teachers strove to instill in children a fear of punishment and sense of shame for their wrongdoings. Such fear and shame were often justified, as harsh consequences, especially corporal punishment and public humiliation, were frequently used to teach self-discipline and maintain classroom order. The popularity of punitive techniques was perhaps best captured in Horace Mann's comment that "adults thought of punishment lightly, spoke of it with amusement, and inflicted it liberally" (as cited in Raichle, 1977/1978).

Strategies changed markedly in the early twentieth century. The use of physical punishment and teaching of Biblical scripture declined as a result of improved teacher training, increased national awareness of children's mental health needs, widespread public concern about the moral decay of the nation, and legal challenges (McClellan, 1999). The emphasis on threats, punishment, and religious education was replaced by an emphasis on democratic values, beliefs, and behaviors. The goal of this movement, known as character education, was to promote the growth of the ideal American citizen. Initially, this goal was advanced through direct teaching strategies. For example, teachers continued to depend on moral exhortations and teaching students to memorize what was "right" and "wrong." Instead of Biblical verses, however, children were taught to memorize oaths, codes of conduct, and passages that focused on qualities of moral character. In time, these direct strategies were replaced by more indirect ones. For example, classroom discussions and the active involvement of students in clubs and cooperative learning activities became common strategies for teaching self-discipline. It was believed that honesty, industry, responsibility, respect, moral decision making, and similar character traits were better learned through experience and practice than through memorization. Perhaps more important, it was believed that systematic efforts to teach such traits and values could *prevent* behavior problems, foster self-discipline, and thus allow teachers to devote less time to the correction of misbehavior. By 1935, every state required the teaching of character education (McKown, 1935).

As the emphasis on character education increased, the emphasis on harsh punitive strategies decreased. In particular, educators began to closely examine alternatives to corporal punishment. Behavioral strategies such as time-out and reinforcement of good behavior were used for correcting minor misbehavior, whereas exclusionary strategies such as suspension and expulsion were used for more serious and chronic misbehavior. Schools also began to understand the need for alternative programs that provided a greater range and intensity of mental health and remedial services. As a result, alternative schools for students with serious behavior problems began to appear (McClellan, 1999).

Thus, for almost a century, schools in America have recognized that school discipline should include more than the correction of everyday behavior problems in the classroom. To be sure, the *correction* of behavior problems continues to be an important component of school discipline, but as recognized by educators in the early 1900s, comprehensive school discipline should include two additional components: *prevention* and *remediation and crisis response*. Whereas the former involves all children, the latter targets those children who exhibit the most serious and chronic behavior problems. What has changed most over the years has been the relative emphasis placed on each of these components and the strategies associated with them. For example, as noted above, correction via fear and punishment was popular at the turn of the twentieth century and prevention via multiple methods of character education was popular in the early and mid twentieth century. Since then, the popularity of a kaleidoscope of program models that employ a variety of preventive and corrective strategies has waxed and waned, including models that focus on values and emotional well-being (e.g., Values Clarification; Raths, Harmin, & Simon, 1966), moral reasoning and social decision making (e.g., the Cognitive-Developmental Approach; Kohlberg, 1981), interpersonal communication (e.g., Teacher Effectiveness Training; Gordon, 1974), social problem solving (Shure, 1992), responsibility (e.g., Reality Therapy; Glasser, 1992), and behavior modification (e.g., Assertive Discipline; Canter & Canter, 1992).

There is little research supporting the above models, as well as other models of school discipline that emphasize a single dimension . However, research does support many of the *strategies* used in these models (Bear, 1998). Indeed, research indicates that multiple strategies are needed to promote responsible behavior and that these strategies must target how children *think*, *feel*, and *act* (Zins, Elias, Greenberg, & Weissberg, 2000). Fortunately, there is a wealth of such strategies from which school psychologists can draw when developing and implementing comprehensive school-based programs for preventing, correcting, and remediating school discipline problems.

School Discipline Today: A Return to Fear and Punishment?

Recently, there has been a shift in emphasis from preventing and correcting school discipline problems to remediating and responding to serious discipline problems. In response to fears among legislators and the general public that school violence has increased in recent years (Skiba & Peterson, 1999), crisis response teams have been created and inservice trainings have been held on how school professionals can respond to violent acts. In addition, zero tolerance policies have become increasingly popular, with student misbehavior often resulting in the automatic application of harsh disciplinary consequences such as suspension, expulsion, and placement in alternative school programs. Moreover, rather than preventing behavior problems by promoting the social, emotional, and moral development of children, many schools have elected to "prevent" behavior problems by focusing on the systematic control of environmental factors perceived to be the primary antecedents of discipline problems. That is, many schools have focused primarily on the purchase of increased security measures, the hiring of police (or school resource officers), and the issuing of staff and student identification badges (Skiba & Peterson, 1999). Such strategies, which also characterize prisons, have received little or no empirical support in the schools (Hyman & Perone, 1998), especially with respect to preventing school violence and promoting socially responsible behavior.

Clearly, acts of violence should not be tolerated: Responding to and remediating serious behavior problems *should* be a priority among those schools in which violence is a problem. Contrary to the perceptions of many parents and educators, however, such schools are rare (Hyman & Perone, 1998; Skiba & Peterson, 1999), especially when "school violence" is appropriately defined as serious (i.e., typically criminal) acts of aggression and not milder forms of verbal and physical aggression (e.g., teasing, bullying, and rejecting others). Although the latter behaviors are relatively normative, the former are fairly uncommon. That is, the majority of schools (90%) report no serious violent crimes (i.e., physical attack or fight with a weapon, robbery, murder, rape, or sexual battery; U.S. Department of Education, 1999), and the majority of students (99%) commit no serious violent crimes, at least not at school (National Center for Education Statistics, 1998). Given these statistics, the great amount of emphasis placed on responses to violence is unwarranted in the vast majority of schools. To be sure, efforts to target violence should be one aspect of a school's discipline plan—a plan that should balance all three necessary components. As discussed below, however, it is unlikely that strategies and programs that focus exclusively on reducing school violence will be effective in developing self-discipline and preventing everyday behavior problems, or in creating a positive atmosphere that is conducive to learning.

BASIC CONSIDERATIONS

There are few topics in school psychology that require a broader base of knowledge and skills than that of school discipline, especially when the components of prevention, correction, and remediation are emphasized. Of particular importance to school psychologists is an understanding of the multiple risk and protective factors related to social and emotional adjustment or maladjustment. These include biological and temperamental factors, social, emotional, and academic competencies, teacher-student relations, family functioning, parenting skills and practices, peer associations, school climate and classroom management strategies, and community factors. Such factors influence behavior in a complex, reciprocal, and cumulative fashion. For example, a student who lacks social-emotional competencies and social skills or whose temperament is characterized by hyperactivity, impulsivity, and inattentiveness will be more difficult to teach. In turn, the student is more likely to be subject to harsh and punitive discipline, especially when placed with a teacher who lacks patience, tolerance, and behavior management skills or who lacks the resources that might be necessary to accommodate the student in a class with many other at-risk students. A teacher's punishment-oriented style toward discipline not only fails to promote social-emotional competencies and prosocial behavior in the student, but also provides negative models of behavior, thereby further impeding the student's social and emotional development. The risk for disciplinary problems is even greater when the child experiences academic failure and the lack of family support. Peer rejection and eventual drift toward a deviant peer group often evolve, as well as the risk of other indicators of social and emotional maladjustment, including low self-esteem and criminality (Kupersmidt, Coie, & Dodge, 1990).

A developmental, multi-risk factor view of conduct problems has profound implications for the prevention, correction, and remediation components of school discipline programs. In particular, it highlights the need for each component to address multiple risk and protective factors. It also suggests why past and present programs focusing on only one aspect of behavior (e.g., self-esteem, social problem solving, communication skills, social skills) fail.

In addition to knowledge of multiple risk and protective factors, it is critical that school psychologists possess knowledge and skills in a variety of areas of psychology and education, including problem-solving consultation, classroom management, character education, systems change, applied behavior analysis, behavior therapy, individual and group counseling, parent education, and crisis intervention. General knowledge of children's social, emotional, and moral development also is important, as is knowledge in the more specific areas of socialization, child rearing, self-regulation, internalization, aggression, and juvenile delinquency. Of central importance to the implementation of strategies and programs that draw from the above skills and knowledge is the evaluation of their effectiveness. That is, school psychologists should play a pivotal role not only in guiding schools in the implementation of empirically based strategies and programs, but also in demonstrating whether or not such strategies and programs result in positive short- and long-term outcomes.

Furthermore, given that school discipline has increasingly become the focus of legal challenges and legislative acts, school psychologists must keep abreast in these areas. In particular, they should be aware of current state and federal regulations, case law, and other court rulings regarding provisions in Section 504 of the Rehabilitation Act and in the 1997 amendments to the Individuals with Disabilities Education Act (IDEA) that focus on school discipline and children with disabilities. These provisions should serve as an impetus for school psychologists to reflect upon the preventive, corrective, and remedial components of their schools' discipline policies and practices.

BEST PRACTICES

In this section we highlight school discipline strategies that characterize programs and models of demonstrated effectiveness. It is important to note that although the strategies are grouped under the categories of prevention, correction, and remediation, few strategies are specific to one category. Our dividing lines between categories of disciplinary strategies are somewhat arbitrary. Undoubtedly, the corrective component would include preventive strategies and the remediation component would incorporate both preventive and corrective strategies. As educational intervention research continues to inform practice, it has become increasingly clear that the most effective learning environments are those in which there is a planful, consistent, seamless, and data-based approach to the prevention, correction, and remediation of disciplinary problems. Our separation of these sections is therefore based more on relative emphases than on exclusive distinctions.

Best Practices for Promoting Self-Discipline and Preventing Discipline Problems

Most authorities on the topic of school discipline agree that prevention should be the primary focus of a school's comprehensive discipline plan. This is for good reason. As noted by Walker, Colvin, and Ramsey (1995), when implemented successfully, comprehensive prevention programs solve the adjustment problems of 75–85% of a school's students and they do so in a cost effective manner, costing approximately $5–20 per student compared to at least $25,000 per student for intensive remediation or treatment programs. Preventive programs target all children, employing a variety of strategies designed to achieve two interrelated goals: (a) the development of self-discipline and (b) the establishment and maintenance of school atmospheres that encourage prosocial behavior and inhibit disciplinary problems. These strategies often serve to promote not only appropriate classroom behavior but also academic achievement and interpersonal relationships (Zins et al., 2000).

Self-discipline entails self-directed inhibition of antisocial behavior, assuming responsibility for one's actions, understanding of right from wrong, and an appreciation of the importance of cooperative relationships in the classroom and society. Self-discipline reflects internalization, which is defined as "taking over the values and attitudes of society as one's own so that socially acceptable behavior is motivated not by anticipation of external consequences but by intrinsic or internal factors" (Grusec & Goodnow, 1994, p. 4). As such, self-discipline is most evident when one acts prosocially and inhibits antisocial behavior in the absence of external regulators of behavior, such as the presence of adults. The development of self-discipline, rather than the external control of behavior, should be the long-term goal of all schools.

SCHOOL-WIDE AND CLASSROOM STRATEGIES

Several decades of research on school and teacher effectiveness have resulted in the identification of a variety of classroom and school-wide strategies for developing self-discipline and preventing behavior problems (Bear, 1998; Good & Brophy, 2000; Grusec & Goodnow, 1994). A summary of recommendations based on this research appears in Table 1.

SKILLS AND DISPOSITIONS OF EFFECTIVE TEACHERS

The classroom management strategies listed in Table 1 characterize teachers who are "authoritative" in their approach to school discipline (Brophy, 1996).

Table 1. Recommended school-based strategies for developing self-discipline and preventing behavior problems

School-wide strategies

- Develop a commitment on the part of all teachers, administrators, and support staff to work together to improve school discipline and promote a positive school climate.
- In collaboration with teachers, students, parents, and other members of the school community develop and consistently enforce clear and fair rules and sanctions for problem behaviors. Rules should be incorporated into written policies that are distributed to all involved parties.
- Set high, yet realistic, academic and behavioral expectations and communicate that such expectations, and accountability for meeting them, should be shared by students, teachers, and parents alike.
- Implement curricula and school-wide activities designed to promote social and emotional learning. This may include lessons embedded within the general curriculum that highlight prosocial and democratic values such as responsibility and respect for others; lessons designed to teach social problem solving and social decision-making skills; and school-wide assemblies that recognize prosocial behavior and convey prosocial values.
- Ensure that physical facilities are well designed and monitored. Increase supervision of children where behavior problems most often occur (e.g., halls, playground, cafeteria).
- Provide ongoing staff development and supervision.
- Make sure that program components are being implemented with fidelity and are being evaluated as to their acceptability and effectiveness.

Classroom strategies

- Adopt classroom management and disciplinary practices that combine proactive, instructive, and corrective strategies. That is, make sure that teachers work hard to prevent misbehaviors before they occur, emphasize self-discipline (as opposed to external control), and correct behavior problems fairly and consistently.
- Arrange the physical environment of each classroom in ways that reduce congestion and facilitate the smooth and quiet movement of students.
- Beginning with the first week of school, establish clear and predictable routines and actively involve students in the establishment of rules and consequences.
- Reinforce appropriate behavior ("catch 'em being good") and emphasize internal attributions (i.e., focusing students' attention on the internal, rather than external, reasons for their behavior).
- Frequently discuss rules and behaviors with students so they not only recognize what behaviors are "right" and "wrong" but also understand why. Such discussions are particularly effective if they use inductions (i.e., focusing students' attention on the effects of their behavior on others instead of on external consequences).
- Prevent boredom and frustration by employing a variety of teaching methods, developmentally appropriate and motivating materials, and curriculum materials and instructions that are adapted to the needs, interests, and abilities of individual students.
- Promote cooperation among students rather than competition.
- Offer opportunities for students to voice their needs and opinions (e.g., class meetings, student councils) and to solve social problems on their own.

Authoritative teachers set high standards and hold high expectations, enforce rules and standards in a firm, fair, and consistent manner, and promote autonomy by encouraging children's active participation in decisions regarding their behavior (Bear, 1998). Authoritative teachers emphasize strategies that are proactive (i.e., focus on the antecedents of behavior), rather than relying solely upon strategies that are reactive (i.e., focus on the consequences of behavior). Their use of positive, proactive discipline techniques, in combination with more punitive, reactive strategies (when needed), increases the likelihood that students will exhibit appropriate behavior willingly rather than grudgingly (Brophy, 1996).

Another important characteristic of authoritative teachers is that they tend to display warmth and acceptance toward their students (Brophy, 1996). Warmth may be communicated by expressing positive affect, sympathy, and support toward students, as well as interest in each student as a person and enjoyment of each student's company. Decades of research have demonstrated that students tend to internalize the values and standards of adults with whom they share warm relationships. Their compliance may initially be motivated by a desire to either imitate or please the adults, but tends to become more internally motivated over time (Hoffman, 2000). In addition to fostering internalization, communication of warmth may facilitate the development of close, supportive relationships between teachers and students, which in turn have been linked with decreased drop-out, risk-taking, and aggression, as well as increased academic and social competence (see Pianta, 1999, for a review). Like warmth, acceptance is delivered non-contingently and thus is not conditional upon students' behavior. Acceptance may be communicated when teachers draw a distinction between students and their misbehavior, adopt an attitude that "everyday is a new day" by not holding students' previous discipline problems against them, and consider several possible explanations for students' behavior rather than automatically assuming negative intentions (Brophy, 1996). Together, warmth and acceptance tend to form the basis for teacher-student relationships characterized by mutual respect, thus motivating students to comply with teachers out of respect for them rather than out of fear or mere obedience.

Not only do effective teachers strive to develop positive relationships with the students in their classrooms, but they also seek to promote positive relationships and a sense of community among the students themselves. By emphasizing cooperative rather than competitive activities, teachers communicate the idea that the classroom is a community in which students can help, rather than hinder, each other's success. Responsibility for classroom behavior is shared by encouraging students to take others' feelings and perspectives into account; by doing so, teachers foster feelings of empathy and guilt, thereby motivating students to engage in prosocial rather than antisocial behavior (Eisenberg & Fabes, 1997). In addition, their efforts to build a caring classroom community promote a sense of belonging among students and a sense of attachment to school, both of which may reduce students' sense of alienation and potential for violence (Walker et al., 1995). Finally, effective teachers regularly and unobtrusively measure and evaluate the effects of their efforts on students' prosocial and antisocial behaviors. In sum, effective teachers create a classroom climate in which their students follow norms for appropriate behavior, not only out of respect for the teacher but also out of respect for one another.

STRATEGIES AND PROGRAMS FOR DEVELOPING RESPONSIBLE BEHAVIOR

In addition to identifying teacher characteristics associated with school discipline, a great deal of research in recent years has focused on individual child characteristics that might be targeted in the prevention of behavior problems and the development of responsible behavior. Of particular emphasis has been the identification of cognitions, emotions, and social skills that mediate social and emotional adjustment in the classroom. Considerable attention has been directed toward social information processing, social problem solving, or social decision-making skills, such as interpreting social cues, clarifying goals, generating solutions, evaluating and choosing solutions, and acting upon the solutions chosen (Crick & Dodge, 1994); anger management and impulse control (Lochman, Dunn, & Wagner, 1997); moral reasoning (Bear, Richards, & Gibbs, 1997); social perspective taking, interpersonal understanding, and negotiation strategies (Selman & Schultz, 1990); empathy (Eisenberg & Fabes, 1997); and self-management, including self-monitoring, self-evaluation, and self-reinforcement skills (Shapiro & Cole, 1994).

Given their roles in mediating classroom behavior, the above areas are routinely incorporated into curriculum packages and programs designed to promote self-discipline and to prevent disciplinary problems ranging from tardiness and classroom disruption to violent forms of aggression. Many of these packages and programs have been shown to be effective in improving social cognitive and emotional skills (Bear, Webster-Stratton, Furlong, & Rhee, 2000). Very few, however, meet the empirically rigorous standard of having demonstrated lasting effects on behavior. Three popular programs for which at least one study demonstrated improvements in behavior that were not simply short-term in duration are *BrainPower* (Hudley, 1999), *PATHS* (Greenberg, Kusche, Cook, & Quamma, 1995), and *Second Step* (Grossman et al., 1997). Note that each of these curriculum programs targets a combination of social, emotional, and behavioral skills.

Overall, research supports strategies that teach a combination of social cognitive, emotional, and behavioral skills. However, there is little, if any, empirical research supporting character education programs reminiscent of the nineteenth century that rely primarily on moral appeal, fear arousal, and information dissemination in teaching students *what* to think (as opposed to *how* to think or how to decide *why* certain actions are wrong; Gottfredson, 1997). Unfortunately, many programs that rely primarily on "lecturing" remain popular today. Included among these are deterrence programs such as Scared Straight and law-related education programs such as DARE (Drug Resistance Awareness Education; Gottfredson, 1997). (Note, however, that the curriculum for the DARE program has been revised recently to include social problem solving and resiliency strategies found to be effective in other programs.) Although widely used among school psychologists, programs that focus on the direct teaching of specific social skills also lack empirical support, especially with respect to lasting improvement in behavior (DuPaul & Eckert, 1994). Likewise, little research indicates that peer mediation programs and recreational programs produce changes in behavior that are maintained over time and that generalize across settings (Gottfredson, 1997). It should be noted, however, that such lack of evidence does not warrant the conclusion that the strategies emphasized in these programs are not valuable, but only that they are likely to be ineffective in achieving lasting improvement in behavior unless they are combined with other strategies.

Best Practices for Correcting Discipline Problems

Teachers are most likely to initiate corrective disciplinary measures when they perceive misbehavior as disrupting or threatening the order of a classroom activity or as endangering the student or others, especially if the behavior is highly visible and contagious. Such misbehavior typically includes noncompliance/defiance, tantrums, aggression, and property destruction (Marquis et al., 2000). The goals of corrective strategies are to terminate the problem behavior if it is presently occurring, weaken or eliminate the likelihood that the student will engage in that behavior again, and replace the behavior with more socially appropriate behavior. As mentioned earlier, many of the preventive strategies described above can, and *should*, be used, when correcting problem behavior. Indeed, incidents of behavior problems provide excellent opportunities for children to learn and practice the cognitive, emotional, and behavioral skills targeted in the prevention component. When correcting misbehavior, however, it often is necessary to strategically apply specific punishment and reinforcement strategies that have proven effective in reducing misbehavior (Martens, Witt, Daly, & Vollmer, 1999; Walker et al., 1995).

PUNISHMENT

No other topic has generated more controversy and debate among writers and authorities on school discipline than the use of punishment in the schools. Whereas few, if any, experts on school discipline disagree that developing self-discipline should be a primary aim of education, many question if the use of punishment helps to achieve this important goal. Over the years, many of the most popular writers on school discipline, including Glasser (1992), Gordon (1974), and Kohn (1996), have been quite strident in their opposition to punishment. But school administrators, teachers, parents, and legislators have been equally strident in demanding that "discipline problems" be controlled and not go unpunished (Skiba & Peterson, 1999). Support for punitive strategies continues for several reasons: They often result in immediate decreases in behavior, they are quick and easy to use, their use often is expected of teachers and school administrators, and they generate a sense of control, power, and justice among those who administer them (Kohn, 1996).

Technically speaking, punishment refers to the use of an unpleasant consequence to decrease the likelihood that the behavior of concern will occur in the future (Martens et al., 1999). Corporal punishment is the most commonly criticized form of punishment. Indeed, nearly all professional organizations in psychology and education, including the National Association of School Psychologists (NASP), advocate that corporal punishment be banned from the schools. Suspension and expulsion also have been the focus of much criticism. As true with punishment strategies in general, suspension and expulsion have many limitations. Among their limitations are that they (a) fail to address factors, including classroom and school factors, that underlie the student's problem behavior; (b) do not teach replacement behaviors; (c) produce only short-term, non-enduring, decreases in behavior problems; (d) are likely to be harmful to the student-teacher relationship; and (e) are likely to foster resentment, retaliation, and emotions that are counterproductive to learning. Moreover, suspension and expulsion often allow students to avoid or escape from situations they find aversive, such as academic work, peer rejection, and a harsh and non-caring teacher. As a result, their inappropriate behavior is negatively reinforced. These strategies also tend to result in the loss of valuable instructional time as well as in increased exposure to negative role models (Schloss & Smith, 1998).

Other punishment strategies include verbal reprimands, removal of privileges, time-out, over-correction, and response cost. These strategies are much less contentious than corporal punishment, expulsion, and suspension and are among the most popular disciplinary strategies used by teachers (Brophy, 1996). Although widely employed and effective in causing short-term decreases in behavior, they too share many of the limitations presented above. In light of these limitations, we do not recommend that punishment strategies necessarily be eliminated (except for corporal punishment) but rather that they be used only after less restrictive interventions have failed to reduce misbehavior. Moreover, it is recommended that when used, punishment strategies should always be combined with strategies for teaching and reinforcing appropriate behaviors (Brophy, 1996; Martens et al., 1999). Such an approach not only has an ethical basis, but also is supported by research.

POSITIVE BEHAVIORAL INTERVENTIONS FOR CORRECTING BEHAVIOR PROBLEMS

Positive reductive techniques. Although positive reinforcement is defined by its strengthening effect on a behavior, a variety of related techniques apply the principle of *positive* reinforcement, seemingly paradoxically, to reduce or eliminate misbehavior (Webber & Scheuermann, 1991). Positive reinforcement, such as privileges and social or material rewards, is used to reward a student when he or she (a) completely refrains from exhibiting a problem behavior during a specified interval of time (i.e., Differential Reinforcement of Other behaviors; DRO), (b) performs a specific appropriate behavior that is physically incompatible (i.e., mutually exclusive) with the problem behavior (i.e., Differential Reinforcement of Incompatible behaviors; DRI), (c) exercises sufficient control over a problem behavior, keeping its frequency under a preset limit during a specified interval of time (i.e., Differential Reinforcement of Lower rates of behavior; DRL), or (d) performs a specific appropriate behavior that achieves the same function for the student but is not physically incompatible with the problem behavior (i.e., Differential Reinforcement of Alternative behaviors; DRA). Because these procedures employ no aversive stimuli to achieve reduction of the problem behavior, they should be considered the first resort when a school psychologist is planning interventions to correct problem behaviors. Procedures such as DRI are especially valuable because they reduce the frequency of the problem behavior while simultaneously strengthening an appropriate replacement behavior.

Behavioral momentum. To correct noncompliance and defiance, teachers may issue a series of requests with which they know the student is likely to comply. For example, the requested activities may be reinforcing in and of themselves or the teacher may know, based on previous experience, that particular compliant responses have been reinforced in the past. Through this series of compliances, a *momentum* of compliance is built up such that, when the heretofore non-complied-with request is delivered, it has a much higher probability of success (Mace, 1996). Of course, as soon as the student complies with this target request, the student should be rewarded. Again, this behavior intervention strategy employs no aversive stimuli.

School-home contingency notes. As emphasized in the previous (and following) section, home-school collaboration greatly enhances the prospects that an intervention will be effective. A simple strategy for facilitating teacher-parent communication and improving student behavior involves the use of school-home contingency notes. The basic components involve a teacher periodically sending home a brief written report on a child's behavioral performance and a parent reviewing the report, delivering the prescribed consequences to the child, signing the report, and sending it back to the teacher. School-home notes have been described as "one of the most effective techniques for improving a student's motivation and classroom behavior. It also is one of the most mismanaged and underutilized techniques" (Jenson & Reavis, 1995, p. 29).

Group contingencies. Any of the basic behavior analytic intervention principles that are applied to individual students also can be applied to groups of students, including whole classes. Group contingencies tend to cluster into one of three broad categories based on the performance criterion in the contingency (Sulzer-Azaroff & Mayer, 1991). In *dependent group contingencies*, the reward (or punishment) of every student in the class depends on the performance of a selected subset of students. This technique should be considered only if the teacher is certain that peer support rather than peer pressure will be provided to the students in the targeted subset. In *independent group contingencies*, the reward (or punishment) of the student depends only on the performance of that student. The contingency is the same for all students but is applied individually. In *interdependent group contingencies*, the reward (or punishment) of any student in the class depends in some way on the performance of every member of the class. There is evidence that well-designed group contingencies and individual contingencies can achieve comparable reductions in problem behaviors (Sulzer-Azaroff & Mayer, 1991). Since group contingencies are often more efficient, they might be favored by teachers in busy situations.

Group contingency strategies often are used in various game formats. Such formats offer powerful motivational properties to suppress undesirable behaviors and strengthen socially valued behaviors within a positive or "fun" learning environment. Probably the earliest classroom motivational game format, and one of the most popular, is the interdependent group contingency called the Good Behavior Game (Barrish, Saunders, & Wolf, 1969). Although different variations of the game have been investigated, most share the following features: (a) specific classroom rules are listed, (b) the class is divided into two or more teams, (c) each team receives a mark on the scoreboard whenever a member of that team earns a point or breaks a rule during a lesson, and (d) the team(s) scoring points above (or below) a predetermined criterion number are awarded reinforcers (e.g., praise, extra recess, less homework, special status). In addition to being relatively simple to operate and effective when properly designed, the Good Behavior Game is viewed favorably by teachers (Tingstrom, 1994).

Self-management. In many respects, procedures to directly teach and strengthen students' self-management of their behaviors and skills represent the pinnacle of behavior analytic corrective procedures. Interestingly, they also may share more methodological details with cognitive approaches than any other behavior analytic procedure, though the differences in terminology are often pronounced. The objectives of these procedures are typically for students to successfully monitor their own behavior; evaluate the behavior with respect to some standard for appropriate behavior; if the behavior is deemed to be inappropriate, then cease it and replace it with an appropriate alternative; if the behavior is deemed to be appropriate, then maintain it and issue self-feedback and/or, at the proper time, self-rewards (Shapiro & Cole, 1994). The overall goal of self-management is for students to increasingly assume adult-like responsibility for their own proper demeanor by fluidly and seamlessly performing these steps as the situation warrants, thereby eliminating the need for external supervision of their behavior. In most training situations, self-recording is an important skill that is embedded between self-monitoring and self-evaluation. This permits students to become aware of the magnitude of their behavior problem and provides a basis for their objective evaluation of their progress. Self-management procedures have been evaluated across hundreds of empirical research investigations and represent powerful preventive and corrective intervention tools for school psychologists.

SELECTING AMONG CORRECTIVE STRATEGIES

Educational research has documented a large number of corrective strategies shown to be effective with some students in some settings under some circumstances (some of which are highlighted here). A school psychologist with knowledge and skills in these strategies might very well confront a dilemma in deciding *which* strategies are the most appropriate for the particular student of concern. Functional behavioral assessment and positive behavioral support provide the school psychologist well-studied principles and processes for making informed decisions resulting in effective interventions.

Functional behavioral assessment. Regardless whether punishment or reinforcement strategies are used to correct misbehavior, the strategies should be chosen on the basis of a functional behavioral assessment (FBA). As seen in the chapter on FBA in this volume, school psychologists can develop more effective and more durable interventions, and develop them more expeditiously, if they first acquire knowledge about the triggers and functions of the problem behaviors and then design the interventions to be responsive to those factors. This conception acknowledges two fundamental beliefs about the nature of problem behaviors: (a) a problem behavior does not occur in a vacuum (it is related to the *context* in which it occurs) and (b) a problem behavior serves some *function* for the student, which makes it logical and reasonable from the student's perspective. A recent large-scale meta-analysis revealed that interventions for problem behaviors were substantially more effective when a functional assessment was conducted first and the outcomes were used to design the intervention (Marquis et al., 2000). Furthermore, when surveyed, most practitioners rated functional assessment procedures as extremely or very useful (Desrochers, Hile, & Williams-Moseley, 1997).

Positive behavioral support. Concomitant with the heightened emphasis on conducting functional assessments, researchers have increasingly endorsed the design and implementation of interventions that provide the student *positive* behavioral support (PBS). This movement has been fueled largely by ethical concerns over the use of intrusive, restrictive, and punitive disciplinary measures and by research documenting negative effects that are frequently associated with their use (Donnellan, LaVigna, Negri-Shoultz, & Fassbender,, 1988). Positive behavioral support has been defined as "the application of behavioral principles within the context of community norms to reduce problem behaviors and build appropriate behaviors that result in durable behavior change" (Marquis et al., 2000, p. 138).

The large-scale meta-analysis by Marquis et al. (2000) showed that PBS interventions have been effective in reducing problem behaviors across a wide variety of student characteristics (including age, gender, degree of handicap, and diagnosis), problem behaviors (including self-injury, tantrums, aggression, and property destruction), and interventions. Also, the use of multi-component interventions to address both the triggers and the functions of a problem behavior appears to be more effective than the use of a single intervention. Their findings substantiate the results of another meta-analysis by Stage and Quiroz (1997), who also reported large effect sizes for behavior analytic interventions. Of the strategies that they studied, the three most effective on average were group contingencies, self-management, and positive-reductive differential reinforcement.

Four factors are responsible for the effectiveness and growing popularity of PBS approaches to disciplinary problems. First, when done well, they are comprehensive. Both the antecedents and the consequences of a problem behavior are addressed. For the first time in the development of the behavior analytic framework, however, the primary emphasis is on the former. In this approach, the antecedents include both non-school factors, such as negative family influences, deficient coping skills, and low self-esteem (sometimes referred to as setting events or slow triggers), and factors in the immediate school environment, such as teacher demands and student provocation. As noted by Marquis et al. (2000), "a key concept in PBS is that deficient contexts must be remediated first in order to reduce problem behavior" (p. 138). Second, after considering the findings of a functional assessment, the selection of an intervention should be guided by the principle of the *least restrictive alternative*. This means that the practitioner always should choose as a first resort the most appropriate intervention strategy that is the least restrictive on a student's personal freedom and the least intrusive on the student's personal space. A valuable aid to a school psychologist in making these selections is the hierarchical ordering of reductive strategies, from least to most restrictive (Schloss & Smith, 1998). Third, whenever interventions are designed to reduce or eliminate a student's problem behaviors, they also must include strategies to teach appropriate replacement behaviors. This serves not only to build the student's behavioral repertoire but also to facilitate the continued suppression of the problem behavior (Marquis et al., 2000). Fourth, prior to changing to a more restrictive, less positive intervention strategy in the hierarchy, a school psychologist first must be informed by data that show that the current intervention is not effective. Such practices are consistent with the behavior analytic tradition of using field data to substantiate clinical impressions and serves to safeguard the student against hasty decisions by interventionists to use more punitive interventions unnecessarily (Schloss & Smith, 1998).

Remediating, and Responding to, Chronic and Serious Behavior Problems

The above preventive and corrective strategies are sufficient for addressing the needs of the majority of children, but more comprehensive and intensive services are necessary for the children who (a) exhibit behavior problems that are chronic and resistant to common classroom-based interventions and (b) exhibit behaviors, irrespective of chronicity, that are of serious harm, or threat thereof, to self and others. Included would be the estimated 2–9% of children whose behavior warrants the diagnosis of conduct disorder and the estimated 6–10% whose behavior warrants the diagnosis of oppositional defiant disorder (McMahon & Wells, 1998). Also included would be children who are targeted in the disciplinary provisions of the 1997 amendments to IDEA, which pertain to cases involving possession of a weapon or illegal drugs, or cases in which the child is determined by an hearing officer to be "substantially likely" to injure self or others.

GENERAL CHARACTERISTICS OF EFFECTIVE REMEDIAL PROGRAMS

There is a wealth of research on the effectiveness of various interventions for children with conduct disorders, including those who exhibit violent behavior. Effective programs tend to share certain characteristics (Bear et al., 2000). In general, they are:

1. *Comprehensive*, targeting multiple risk and protective factors

2. *Broad-based*, adopting a systems perspective in which schools, families, agencies, and communities work together in preventing and treating antisocial and aggressive behavior

3. *Guided by theory and research*, using interventions that are conceptually and empirically justified

4. *Intensive and sustained over time*, with a commitment to providing adequate resources

5. *Sensitive to* developmental differences in behavior, the determinants of behavior, and the appropriateness of interventions

6. *Cognizant of the importance of early intervention*. This would include interventions provided at an early age, as well as interventions that are provided when indicators of behavior problems first appear

In particular, there is growing evidence that a parent or family component to intervention is critical to produce lasting improvements in behavior. In combination with parent management training or family therapy, or when these services are not feasible, home-school collaboration and consultation should be provided.

CRISIS INTERVENTION

In light of school shootings that have plagued the nation, the responses that schools and communities make to crises are now recognized as critical components of intervention. Readers are referred to two free documents produced by the U.S. Department of Education in collaboration with NASP and the Center for Effective Collaboration and Practice: *Early Warning, Timely Response: A Guide to Safe Schools* (Dwyer, Osher, & Warger, 1998) and *Safeguarding Our Children: An Action Guide* (Dwyer & Osher, 2000), for useful guidelines and recommendations in developing crisis response teams and in responding to crises.

ALTERNATIVE EDUCATION PROGRAMS

The rapid growth in alternative education programs across the nation can largely be attributed to the widespread adoption of zero tolerance policies and to the new provisions in IDEA that stipulate that children with disabilities be placed into an interim alternative educational setting, with or without parent permission, for certain disciplinary infractions. It is beyond the scope of this chapter to review federal regulations that govern when children with disabilities may be placed into such settings or to review related issues and concepts (e.g., manifestation determination). School psychologists are referred to other resources, including the chapter in this volume on Functional Behavioral Assessment and several recent publications by NASP (see Bear, Quinn, & Burkholder, 2001; Telzrow & Tankersley, 2000). Little research exists on the effectiveness of alternative education, particularly interim alternative educational programs (Bear, 1999; Bear et al., 2001). Research that does exist indicates that alternative educational programs that emphasize punishment and control are associated with poor student attitudes and no reduction in delinquent behavior (Gottfredson, 1997). Research also indicates that an atmosphere characterized by a "community of support" is important to program success (Wehlage, 1991). Features of such a community of support include (Bear et al., 2001) (a) qualified teachers and support staff who volunteer to work with challenging students; (b) flexibility in program management, decision making, and role functions; (c) sufficient funding and resources; (d) sensitivity to individual and cultural differences; (e) clear individual-child and program goals; (f) on-site counseling services; (g) a case management approach to student services; (h) program evaluation; (i) research-supported interventions; and (j) networks of additional supports and services. With respect to interim alternative education settings, it is likely that in addition to the above characteristics, a critical element of success will be the provision of research-supported interventions that are linked to assessment and that are implemented in the setting to which the student returns (Bear et. al., 2001).

SUMMARY

Many persons consider the overarching purpose of education to be the preparation of self-disciplined individuals who become responsible citizens. The linchpin in fulfilling this purpose is school discipline. No longer do we rely on moral exhortations and rote memorization of codes of conduct, however, as the backbone of our discipline programs. Since the turn of the twentieth century, substantial empirical research has accumulated to reveal that effective school discipline programs must be comprehensive, sustained, and composed of three major components: (a) preventive strategies for developing self-discipline and socially responsible behavior, (b) corrective strategies for dealing with misbehavior once it has occurred, and (c) remediation programs for addressing chronic and serious behavior problems.

Research indicates that within each discipline component, multiple factors must be targeted, including how children think, feel, and act; student-teacher relationships; the classroom environment and curriculum; and home and community influences. Of particular relevance are the findings on the characteristics of effective teachers, the importance of fostering social problem-solving skills and social competence in children, and the utility of conducting functional behavioral assessments prior to implementing corrective measures. Schools that address the three major discipline components and multiple factors within each component are successful in creating safe and orderly learning environments as well as in developing self-disciplined and responsible citizens.

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Based on both research and practice, this book describes strategies that teachers have found effective in promoting self-discipline among students. A variety of behaviors are addressed, including hyperactivity, defiance, and rejection. Specific strategies for preventing and responding to these behaviors are presented, along with more general teacher characteristics.

Elias, M. J., Zins, J. E., Weissberg, R. P., Frey, K. S., Greenberg, M. T., Haynes, N. M., Kessler, R., Schwab-Stone, M. E., & Shriver, T. P. (1997). *Promoting social and emotional learning: Guidelines for educators.* Alexandria, VA: Association for Supervision and Curriculum Development.

More than 100,000 copies of this book have been sold. Based on multiple theories, research, and their experiences in the schools, the authors provide educators with practical guidelines and multiple strategies for developing social and emotional competence.

Jones, V. F., & Jones, L. S. (2000). *Comprehensive classroom management: Creating communities of support and solving problems* (6th ed.). Boston: Allyn & Bacon.

Among the many basic texts on classroom management, this is perhaps the best because it offers a comprehensive and balanced perspective on the prevention and correction of common classroom behaviors. Unlike other texts that present multiple models of school discipline with little supporting research, this text highlights strategies of demonstrated effectiveness.

Poland, S. & McCormick, J. S. (1999). *Coping with crisis: A resource for schools, parents, and communities.* Longmont, CO: Sopris West.

This valuable reference provides practical strategies to school psychologists and others for responding to school crises, including school shootings, suicides, fights, and gang-related violence. Step-by-step guidelines and actual case studies are presented.

63 Best Practices in the Systematic Direct Observation of Student Behavior

John M. Hintze
University of Massachusetts at Amherst
Robert J. Volpe and Edward S. Shapiro
Lehigh University

OVERVIEW

Direct observation is one of the most widely used assessment procedures by school psychologists. In a survey of more than 1,000 school psychology practitioners, Wilson and Reschly (1996) found that of the 26 different types of assessment instruments listed across seven different assessment categories (e.g., ability/intelligence, social/emotional, visual/motor), structured observational methods were ranked highest in terms of frequency of use. Overall, practitioners report that they conduct more than 15 behavioral observations of student behavior during the course of a typical month.

Systematic direct observation refers to observation of behavior other than behavior that has been explicitly elicited by a predetermined and standardized set of stimuli (i.e., test behavior (Salvia & Ysseldyke, 2001)). School psychology practitioners commonly use both naturalistic and systematic direct approaches to observing student behavior. Briefly, naturalistic observation approaches refer to those observational procedures where the observer enters specific situations (e.g., a classroom) and observes all that is going on with no predetermined behaviors in mind. Here, the most common way of recording observations is to keep an anecdotal record of the behaviors that seem important to the observer. In summarizing the information, the observer provides a complete description of the many behaviors and the context in which they occurred.

In contrast, systematic direct approaches to behavioral observation are distinguished by five characteristics (Salvia & Ysseldyke, 2001). First, the goal of observation is to measure specific behaviors. Second, the behaviors being observed have been operationally defined a priori in a precise manner. Third, observations are conducted under standardized procedures and are highly objective in nature. Fourth, the times and places for observation are carefully selected and specified. Fifth, scoring and summarizing of data are standardized and do not vary from one observer to another.

Both naturalistic and systematic direct approaches to observing behavior have proven useful in developing theory and practice related to the assessment and intervention of student behavior. This chapter provides an overview of (a) naturalistic observational procedures, (b) systematic direct observational procedures, and (c) observational instruments as they related to the observation of student behavior in the classroom.

BASIC CONSIDERATIONS

Rationale for the Systematic Direct Observation of Behavior

With the reauthorization of the Individuals with Disabilities Education Act (IDEA, 1997), now more than ever it is absolutely incumbent that school psychologists adopt assessment and evaluation practices that allow for gathering relevant functional information on student behavior and performance patterns. Specifically, sections 300.532(b) and (c) under the *Procedures for Evaluation and Determination of Eligibility* of IDEA indicate that a variety of assessment tools and strategies be used to gather relevant *functional* and developmental information about a child and that they be *validated* for the specific purpose for which they are used. Moreover, section 300.532(d) requires the use of tests and other evaluation materials that include those tailored to assess specific areas of educational need and not merely those that are designed to provide a single general intelligence quotient. Similarly, sections 300.533(a)(1)(ii) and (iii) indicate that as part of the initial evaluation for special education, evaluation data include current classroom-based assessments and *observations* conducted by teachers and related services providers. Once deemed eligible for special education, section 300.347(2)(ii) requires the specification of *measurable* annual goals in the development of the individualized education program that meet each of the child's needs as they pertain to the disability classification. The spirit of IDEA is also seen in the *Principles for Professional Ethics* and *Standards for the Provision of School Psychological Services* of the *Professional Conduct Manual* (National Association of School Psychologists, 2000). Here, school psychologists are required to use assessment techniques and instruments that have established validity and reliability and to adopt assessment practices that increase the likelihood of developing effective educational interventions.

The call for the increased use of systematic direct observational procedures and a movement toward more ecologically sensitive functional assessment practices contrast directly with those of a more traditional approach that have long been the standard in school psychological assessment practices. Table 1 provides a comparison between traditional and behavioral assessment across a number of key fundamentals. Central to the difference between the two is how they view the role and causes of behavior and the type of inferences that can be made from observing behavior. From a behavioral perspective, all behavior is a result of the dynamic interplay between an individual and the environment. Thus, observing a person's behavior is useful only to the extent that it can be used to summarize a person under a specific set of circumstances. Behavior is thought to be specific to a situation. For this reason, assessment needs to be ongoing and direct until a certain level of stability or generalizability is observed. This is in contrast to a more traditional approach whereby observed behavior is assumed to be enduring and stable across all situations and intrapsychic or residing within the individual. For this reason, assessment can be global and static; that is, occurring just once or enough to measure the internal construct.

Table 1. Comparison between behavioral and traditional assessment

	Behavioral	*Traditional*
Causes of behavior	Interaction between individual and environment	Enduring underlying states or traits
Role of behavior	Important as a sample of an individual's behavior in a specific situation	Behavior is important only to the extent that it represents the underlying trait.
Consistency of behavior	Behavior thought to be specific to a specific situation	Behavior assumed to be consistent across time and settings.
Use of data	To describe and quantify behavior under specific conditions. To select appropriate interventions. To monitor effectiveness of interventions.	To describe personality Functioning and etiology. To diagnose and classify. To make prognosis or prediction.
Level of inference	Low.	High.
Comparisons made	Both within and between individual.	Between individual.
Timing of assessment	Ongoing. Before, during, and after intervention.	Before and occasionally after intervention.

Note. Adapted from Goldfried and Kent (1972) and Hartmann, Roper, and Bradford (1979).

BEST PRACTICES IN SYSTEMATIC DIRECT OBSERVATION

Methods of Systematic Direct Observation

Naturalistic Observation

Naturalistic observation refers to the recording of behavioral events in their natural settings at the time they occur, using trained or impartial observers, where descriptions of behaviors require little if any inference beyond that which is observed and recorded (Jones, Reid, & Patterson, 1979). Similar to descriptive, narrative, or anecdotal observations, naturalistic observation employs the recording of salient behaviors and discriminative stimuli as they are observed chronologically in time. For example, a school psychologist might observe a student in the classroom and note the sequence of behaviors or activities that are hypothesized to be important or serve a reinforcing function in maintaining patterns of behavior. If a student is observed to refuse the request of a teacher, then this datum would be noted and recorded as a behavioral observation or event.

According to Wilson and Reschly (1996), naturalistic observation is the most frequently used type of direct observation, used nearly twice as often as other more systematic approaches to observation. The reason for this practice most likely lies in its ease in use and minimal training requirements. In practice, naturalistic observation usually takes the form or makes use of one of two recording methods. The easiest form involves simply observing and noting behaviors and events descriptively or anecdotally as they occur in the natural setting. Typically, such behaviors and events would be recorded in a written fashion, listed chronologically as they appeared in real time. Interpretation is limited to a descriptive account of the types of behaviors and events observed and their temporal ordering in time. Because interpretation is limited, such anecdotal and descriptive accounts cannot be used for making high-stakes decisions. In fact, one of the limitations posed by naturalistic observation is the inclination to "over interpret" the data, or make inferences regarding student behavioral patterns from a limited and unstandardized sample of behavior. Likewise, observers are prone to use confirmatory search strategies whereby increased attention is directed toward those behaviors that confirm the observers' original hypotheses. In both situations, bias in the selection and interpretation of the observation is present.

A second and equally popular method of naturalistic observation involves the use of A-B-C (Antecedent-Behavior-Consequence) observation and recording. Similar to anecdotal or descriptive observational techniques, here the practitioner makes careful note of those environmental arrangements, behaviors, or events occurring just before the behavior of concern is observed (i.e., the antecedent) and what behaviors or events are observed as a result of the behavior (i.e., the consequence). By using the example of refusing a teacher request above, the antecedent would most likely be some type of teacher request or directive, the behavior would be the act of refusing, and the consequence would most likely be a brief description of how the teacher responded to the student refusal. Figure 1 presents an example of the type of recording schedule that is typically used during A-B-C observations. This type of recording schedule can be easily constructed by dividing a sheet of paper into three columns, each of which corresponds to one of the three conditions (i.e., antecedents, behaviors, and consequences). Once constructed, the observer provides a brief narrative of each condition as they are observed in the natural setting. Although listed as A-B-C, the behavior column is generally completed first and then followed by the antecedents and consequences. The reasoning behind this rests on the understanding that without the presence of some salient recordable behavior, there is little use in recording antecedents and consequences. While numerous behaviors will obviously occur, only those of clinical importance are noted. Given this, it is often helpful to specify beforehand those behaviors that will be recorded during the observation period.

Naturalistic observation techniques have become increasingly popular owing in part to their utility as part of an overall functional assessment strategy. Here, descriptive or anecdotal and A-B-C analyses are used as a preliminary step in data collection and serve the purpose of developing testable hypotheses regarding the motivation and maintenance of student behavior. For example, O'Neill et al. (1997) use naturalistic observation strategies as the first step in an overall functional assessment procedure that allows the clinician to operationally define target behaviors and formulate preliminary hypotheses regarding the function of behavior. Once salient behaviors and environmental events are observed naturalistically,

Figure 1. Example of naturalistic observation using A-B-C observation and recording

A-B-C Observation and Recording Sheet

Antecedent	Behavior	Consequence
Teacher asks students to take out paper and pencil.	Target student does not take out paper and pencil. Plays with toy car on desk instead.	Teacher reprimands target student.
Teacher takes paper and pencil out of target student's desk.	Target student pushes paper and pencil off desk and onto floor. Target student puts head on desk with arms folded around head.	Teacher removes request. Teacher picks up paper and pencil and places on desk. Tells target student he can begin work when he calms down.
Teacher continues lesson with rest of class.	Target student begins to play with car on desk again.	Teacher stops lesson and takes car away from target student.
Teacher directs student to put name on top of paper.	Target student kicks desk away. Sits in chair with arms folded across chest.	Teacher ignores target student.

they are observed systematically by using time-sampling procedures.

The advantages of using naturalistic observation procedures to identify target behaviors in this manner are that (a) their importance or social validity of behaviors can be assessed by noting the frequency of their occurrence in the natural setting, (b) their relationship to important environmental antecedents and consequences can be examined systematically, (c) data can be used to develop testable hypotheses regarding the function of behavior, and (d) the data gathered serve an important step in allowing the clinician to make decisions regarding the function of behavior rather than focusing on topographical and descriptive accounts of what is observed. As was previously noted, one of the restrictions of natural descriptive accounts of behavior is their limited utility in decision making. Because the data gathered are purely descriptive in nature, decisions are restricted to summary statements of what was observed and little else. For the most part, such data prove limited in a more problem-solving assessment orientation. Nonetheless, naturalistic descriptive accounts can be extremely useful when used as a preliminary step in a problem-solving functional assessment paradigm. Here the data gathered form the basis for developing initial hypotheses that can be subsequently observed in a more systematic fashion. The next two sections describe such systematic observational methods and the way in which practitioners can use such methods to quantify behavior from an ecological perspective.

OBSERVATIONAL PROCEDURES

Observational procedures refer to a set of techniques that school psychologists can use to quantify behavior along one or multiple dimensions (Kratochwill, Alper, & Cancelli, 1980). For example, a school psychologist might be interested in assessing the frequency in which a referred student is out of his seat. After operationally defining the behavior of interest, the target child would be directly observed for a specified length of time with the number of times he got out of his seat noted. Additionally, the length of time spent out of his seat for each occurrence might be noted. If out-of-seat behavior does not appear to be the main issue of concern, then another behavior can be specified and observed in a similar manner. Likewise, multiple behaviors can be identified and observed concurrently. Although the example is oversimplified, here the advantages of using observational procedures are that they are flexible and can be tailored to suit the specific needs of the assessment situation.

Measuring and Recording Behavior Systematically. There are various types of data that can be collected during systematic direct observation. A workable definition of a target behavior is one that provides an accurate description of the behavior that clearly defines the parameters of its existence and nonexistence (Heward, 1987). As such, constructs and reifications do not lend themselves well to direct observation. For example, raising one's hand to be called on is an observable and measurable behavior. Behaving "off the wall" is not something that can be directly observed. In developing explicit behavioral definitions Hawkins and Dobes (1977) offer the following suggestions:

1. The definition should be objective, referring only to observable characteristics of the behavior and environment.

2. A workable behavioral definition is readable and unambiguous such that an experienced observer could read it and readily paraphrase it accurately.

3. The definition should be complete, delineating the boundaries of what is to be included as an instance of the behavior and what is to be considered a noninstance of the behavior.

As such, operational definitions must be objective, ensuring that specific instances of the defined target behavior can be readily observed and recorded. In addition, an operational definition is a technological definition that enables others to use and replicate it (Baer, Wolf, & Risely, 1968). A complete operational definition identifies what is not the target behavior and aids observers in discriminating the target behavior from similar responses.

Once behavior is defined, the calibration of the operational definition is determined by the nature of the data; that is, the frequency of its occurrence and the particular interests of the observer (Hintze & Shapiro, 1995). In addition, practical considerations such as the availability of observers, the amount of time the student is accessible, or any combination of these factors, all dictate the type of data collected. Because each of these data may yield different results, the method of data collection must be clearly understood.

Frequency or Event Recording: The type of data known as frequency or event recording involves counting the number of occurrences of behavior observed during a specified time period. When the time periods in which the behavior is counted vary, frequencies are converted to rates of behavior per unit of time. For example, an observer may report that a target child raised a hand at an average rate of one time per minute during three separate observations conducted over the course of three days, even though the actual duration of each observation period varied. By using rate of behavior allows the practitioner to compare the occurrence of behavior across observational periods (Shapiro, 1987).

Frequency or event recording is most useful when observing behaviors that have a discrete beginning and ending. Throwing paper airplanes, hitting, and the raising of a hand are all examples of such behaviors. Behaviors that are continuous or persist for longer durations sometimes prove difficult to observe by using event recording. For example, pencil tapping, talking, or on-task behavior would be difficult to observe by using such an observational system. As with all recording schedules, a very clear operational definition of the target behavior helps ensure that accurate frequency data are being collected. In instances such as pencil tapping and talking, episodes of the behavior may be defined by using a time dimension as well as a topographical description of the behavior. For example, pencil tapping may be defined as the continuous tapping of the pencil against a physical surface that produces audible noise for at least five consecutive seconds. In this way, the frequency count for pencil tapping is easily recorded rather than the actual number of times the pencil is tapped against a physical surface.

A second consideration when using event recording has to do with the actual length of time each episode of the behavior occurs for. Generally speaking, each episode of the behavior should take approximately the same amount of time for each instance of the behavior (Barton & Ascione, 1984). For example, if an observer is observing occurrences of "noncompliance," the length of time might vary widely from a simple refusal to follow a direction to a knock-down drag-out tantrum that lasts 20 minutes. Because each episode would be coded as the occurrence of one act of noncompliance, each would be weighted equally in terms of the way in which it was quantified. Obviously, the variability in the duration of each episode is lost. For this reason, when the length of time a behavior occurs is important, event recording might not be the most appropriate recording schedule. It may, however, be combined with other recording options (e.g., duration) to capture both frequency and time dimensions of a particular behavior.

Another instance in which frequency or event recording is particularly useful is when behavior occurs at a relatively low rate. Such behaviors often occur infrequently but are of interest because of their intensity or seriousness. For example, running out of the classroom may occur once or twice a day, but may represent significant difficulties for the student. The advantage here is that with low frequency behaviors, observational periods can be continuous and designed in a fashion to be relatively unobtrusive and at low time and cost to the observer. The disadvantage, however, is that if any instance of the behavior is not observed and recorded, the reliability of the observed data is sacrificed.

As can be seen, the methods for frequency or event recording are quite varied. Commonly, the frequency in which behavior occurs is recorded in a written format (e.g., tallies on a piece of paper) with the beginning and ending time of the observational session noted. In addition to simple paper-and-pencil recording, hand-held mechanical recorders such as those used to keep track of attendance at a social function, golf wrist counters, or a wrist abacus can be used. In the end, any device capable of keeping a cumulative frequency count can be used to perform event recording. Figure 2 presents an example of a paper-and-pencil frequency recording schedule.

Duration Recording: Another type of behavioral response that can be recorded is the duration of the behavior. Duration measures may be very helpful with certain types of school-related behaviors. Studying, temper tantrums, social isolation, and aggressive outbursts are good examples of behaviors in which duration is generally important. Duration is also appropriate in cases where changing the duration of the behavior is an important target for intervention. As in the case of event recording, behaviors that have discrete beginnings and endings may be assessed in the length of time the behavior lasts.

The duration of a behavior is usually standardized in two ways (Salvia & Ysseldyke, 2001). First, the average duration of each occurrence may be computed. For example, Gary got up and out of his seat five times during a 20-minute observation. The duration of each episode was 2, 3, 4, 5, and 6 minutes, respectively. In this case the average duration was 4 minutes (i.e., [2 + 3 + 4 + 5 + 6]/5). Second, the total duration may be computed. In this same example, Gary was out of his seat a total of 20 minutes.

The most precise nonautomated instrument for collecting duration data is a stopwatch. The procedure for recording total duration with a stopwatch is to start

Figure 2. Example of frequency recording. Target behaviors include getting out of seat (OS), calling out (CAL), and teacher redirections (TR)

Frequency Observation and Recording Sheet

Date: May 13, 2000

Observer: A. VanDelay

Time	OS	CAL	TR
9:00 a.m.–10:00 a.m.	X X X	XXXXX	XXXXXXX
10:00 a.m.–11:00 a.m.	X	XXX	XXXX
11:00 a.m.–12.00 p.m.	XX	X	XXXXXX

the stopwatch as the behavior begins and stop the timing at the end of the episode. Without resetting the stopwatch, the observer starts the stopwatch again at the beginning of the second occurrence of the behavior and stops timing at the end of the second episode. The observer continues to accumulate the durations of time in this fashion until the end of the observation period and then transfers the total duration of time showing on the stopwatch to a record sheet. Figure 3 presents an example of duration recording for thumb sucking.

When observation sessions are consistent in length (e.g., 20 minutes), total duration can be compared across sessions. However, when observation sessions vary in length, a percent ratio of total duration to observation length must be computed before comparisons across observational sessions can be made. For example, if the total duration of Gary's out-of-seat was 10 minutes in each of three observational sessions but the observational sessions varied from 20-, to 30-, and 40-minute time frames, then the total duration percent that he was out of his seat would be noted as 50, 33, and 25%, respectively.

The procedure for recording duration per occurrence with a stopwatch is to start the stopwatch as the behavior begins and stop the timing at the end of the episode. The observer transfers the duration of time showing on the stopwatch to a data sheet and resets the watch. The stopwatch is started again at the beginning of the second occurrence of the behavior and is stopped at the end. The duration of time for each episode is then summed and divided by the number of occurrences yielding an average duration per episode.

Latency Recording: Latency recording is the measurement of elapsed time between the onset of a stimulus or signal (e.g., a verbal directive) and the initiation of a specified behavior (Cooper, 1987). Latency recording should be used when the major concern is the length of time between an opportunity to elicit a behavior (e.g., after the presentation of the verbal directive) and the actual time it takes to begin performing the behavior. In this case, the response latency would be the length of time between the end of the teacher's directive and initiation of the student's compliance with the directive. As with event and duration recording, when latency is assessed, both the signal and the behavior of interest must have discrete beginnings. The procedure for latency recording is similar to that for duration recording. The observer uses a stopwatch and begins timing immediately after the signal or stimulus is delivered and stops timing at the instant the target behavior is initiated. For each

Figure 3. Example of duration recording for thumb sucking

Duration Observation and Recording Sheet

Student: Alex
Observer: B. Matthews
Behavior: Thumb Sucking
Date: August 5, 2000

Time start: 10:10
Time stop: 10:30

Thumb sucking (separate incidents)	Elapsed time per episode (in minutes and seconds)
1	1' 17"
2	6' 42"
3	2' 11"
4	7' 26"
5	52"
	Total: 18' 28"

Average duration per episode, 3' 42"

episode, the summary datum is the time lapse between the signal and the behavior. The actual time that it takes to complete the target behavior *does not* figure into latency recording. This is because behaviors can vary widely in the time it takes to complete them. For example, the directive of "pick up your pencil and put your name on the top of the paper" and "pick up your pencil and complete the *New York Times* Sunday crossword puzzle" would each be expected to have similar latencies. Obviously, the duration of these two behaviors would vary significantly. If completion times of these two behaviors were of primary interest, then duration would be an appropriate recording schedule. Moreover, like duration, both average and total latency can be used to summarize observed behaviors.

Time-Sampling Interval Recording: Whereas frequency, duration, and latency recording are able to accurately capture the dimensions of behavior each represents, oftentimes it is difficult to use any one of the recording schedules because of practical or measurement concerns. Issues dealing with availability of observers, lack of time, or operational issues (e.g., complications in determining exact beginning and ending of behavior) all contribute to the difficulty in observing behavior continuously. The essential characteristics of time sampling interval recording involve selecting a time period for observation, dividing the observational period into a number of equal intervals, and recording whether or not a specified target behavior has occurred during each interval (Merrell, 1999). For example, a 30-minute observation period might be broken down into 120 15-second intervals. Within each interval, the presence or absence of one or multiple behaviors might be assessed. Presence or absence of the behavior will be determined by one of three, or any combination, of three recording schedules discussed below (i.e., whole, partial, or momentary time sampling recording).

Also, unlike event, duration, and latency recording that provide exact frequency or time dimensions of observed behavior, time sampling interval recording provides only approximates for the behavior as it occurs. That being so, for situations where the exact number of occurrences or time spent engaged in the behavior, or latency of the behavior is of concern, time sampling interval recording might not be the best option. Nonetheless, time sampling interval recording provides an excellent alternative when conditions warrant observing a number of behaviors simultaneously, or for behaviors that occur at a moderate to high rate or steady state.

Whole-Interval Recording: In whole interval recording, the target behavior is scored as having occurred only when it is present throughout the entire interval (intervals are scored usually with a plus sign or other mark to indicate the presence of the behavior, and empty intervals generally denote the absence of the behavior). Since the behavior must be present for the entire interval, whole-interval recording lends itself quite well to behaviors that are continuous or intervals that are of a short duration (Shapiro & Skinner, 1990). One of the drawbacks of whole-interval recording, however, is that has a tendency to underestimate the presence of the behavior in real time. Consider for example, a whole-interval recording schedule where each interval is 15 seconds long. If, for example, off-task behavior were our target behavior and it was observed for 13 of the 15 seconds during the interval, then the interval would not be scored for the presence of off-task behavior since it did not occur for the entire 15-second interval. In essence, it would appear as if the target student was on-task for the entire 15 seconds. Because of this, whole-interval recording is well suited for behaviors targeted for increase through intervention efforts (Sulzer-Azaroff & Mayer, 1991).

Partial-Interval Recording: In contrast to whole-interval recording, with partial-interval recording an occurrence of the behavior is scored if it occurs during any part of the interval. Thus, if a behavior begins before the interval begins and ends within the interval, then an occurrence is scored. Similarly, if the behavior starts after the beginning of the interval, then an occurrence is scored. Finally, if multiple occurrences of the behavior are observed within the same interval, then the interval is simply scored as if the behavior occurred once. Again, in comparison to whole-interval recording, partial-interval recording is a good choice for behaviors that occur at a relatively low rate or behaviors of somewhat inconsistent duration. Also, partial-interval recording tends to overestimate the actual occurrence of the behavior. By using the example above, if the target student were observed to be off-task for only 2 seconds of the 15-second interval, then the interval would be scored for the presence of the behavior as if it occurred for the entire 15-second interval. Because of this, partial-interval recording is well suited for behaviors targeted for decrease through intervention efforts (Sulzer-Azaroff & Mayer, 1991).

Momentary Time-Sampling: Finally, with momentary time-sampling, a behavior is scored as present or absent only during the moment that a timed interval begins. With this technique, the observer notes either the presence or absence of the behavior at a brief instant during the interval. By using the above example, the target student would be considered off-task if at the moment of observation (e.g., very beginning of a 15-second interval) he was observed to be off-task, irrespective of any behavior observed during the rest of the interval. Salvia and Hughes (1990) have summarized a number of studies investigating the accuracy of these time-sampling procedures. As was previously noted, both whole-interval and partial-interval sampling procedures provide inaccurate estimates of the behavior in real time. Momentary time-sampling, although based on the smallest sample of behavior, provides the least biased estimate of behavior as it actually occurs (Suen & Ary, 1989).

OBSERVATIONAL INSTRUMENTS

In contrast to observational procedures, observational instruments have been developed to assess a specific range of behaviors. For example, a school psychologist might choose to use an observational instrument designed specifically to quantify the percentage of time a student is academically engaged or off-task or the frequency with which a teacher provides directives, provides opportunities to respond, or positively reinforces student efforts. Unlike more generic observational procedures, however, the flexibility of observational instruments is typically limited. With standardized administration and scoring procedures, practitioners cannot alter the operational definitions to suit their individual needs. However, because they have been developed with a specific purpose in mind, observational instruments tend to provide a more detailed account of a student's behavioral pattern across a variety of behaviors of common interest to the observer. What is lost in flexibility is gained in breadth of behaviors observed. While school psychologists could certainly develop their own observational instruments individually tailored to particular behavioral constructs, the time spent in development may be cost and labor prohibitive.

Nonetheless, the use of observational instruments continues to gain in popularity. The increased interest in such techniques is due in part to the optimization of laptop computers and hand-held data recording devices. What follows are two examples of published systematic observation codes. The Behavior Observation of Students in Schools (BOSS) (Shapiro, 1996) can be a useful part of an academic assessment in classroom settings. It may also be used in assessments of disruptive behavior, if aggressive behavior is not of principal concern. The Attention Deficit Hyperactivity Disorder School Observation Code (ADHDSOC) (Gadow, Sprafkin, & Nolan, 1996) was specifically designed to assess disruptive child behavior across a number of school settings and includes various measures of aggressive child behavior. These specific codes were selected for review owing to their ease of use, and their differential purposes.

Behavior Observation of Students in Schools. The BOSS is a useful observation code for assessing child academic behavior in the classroom environment. It is a relatively easy code to learn and use. In simple terms, the BOSS assesses levels of "on-task" and "off-task" behavior. The amount of time children are engaged in academic tasks appears to be an important instructional variable (see Gettinger, 1986, for a review). Although several existing observation codes include behaviors that represent academic engagement, the BOSS is unique in that it divides engagement into two categories: (a) active engagement (e.g., writing, raising hand, answering a question) and (b) passive engagement (e.g., looking at a worksheet, listening to teacher directions). Furthermore, off-task behaviors are assorted into three categories: (a) off-task motor (e.g., out-of-seat, fidgeting, playing with pencil), (b) off-task verbal (e.g., calling out, talking to a peer when prohibited), and (c) off-task passive (e.g., looking around, looking out the window). Finally, the BOSS also includes a measure of teacher directed instruction (TDI), which provides an estimate of the amount of time the teacher is engaged in direct instruction. For example, the TDI category would be scored as present if the teacher were lecturing to the class and absent if the teacher were sitting at the desk correcting papers.

The BOSS is administered in 15-second intervals for a period of at least 15 minutes. The on-task behaviors (i.e., active and passive engagement) are scored at the beginning of each interval by using momentary time-sampling. For the remainder of each interval, the off-task behaviors (i.e., motor, verbal, and passive) are noted by using partial interval scoring. In addition, during every fifth interval, rather than observing the target student, the behavior of a randomly selected peer is observed and noted. In doing so, comparisons can be made between the target student and a peer composite that represents "typical" behavior during the observational period. Once the observation is completed, scoring summaries are computed for on- and off-task behaviors of both the target student and the peer composite, as well as an overall estimate of how much time the teacher was engaged in direct instruction.

Attention Deficit Hyperactivity Disorder School Observation Code. According to its authors, the ADHDSOC was developed as both a screening measure and as a tool for evaluating the effects of interventions for children diagnosed with attention-deficit/hyperactivity and related disorders (e.g., oppositional defiant disorder). The ADHDSOC can be used across a number of school settings (e.g., classroom, lunchroom, playground). For example, the following seven behavior categories are scored in classroom situations: (a) interference (e.g., target student calls out when it is inappropriate to do so), (b) motor movement (e.g., target student gets out of seat without permission, (c) noncompliance (e.g., target student ignores verbal direction from teacher or aide), (d) verbal aggression (e.g., target student curses), (e) symbolic aggression (e.g., target student takes another student's pencil), (f) object aggression (e.g., target student kicks chair or desk), and (g) off-task (e.g., target student stops working on assignment and stares out the window). Though the various aggression scores (i.e., verbal, symbolic, object) may be coded individually, the authors suggest collapsing them into a single category termed "nonphysical aggression." For observations conducted in the lunchroom or on the playground the following categories are coded: (a) appropriate social behavior (e.g., target student is observed talking to another child appropriately), (b) noncompliance, (c) nonphysical aggression (this includes both object and symbolic aggression), (d) verbal aggression, and (e) physical aggression (e.g., target student trips another child). Across all settings, target behaviors are scored on a partial interval every 15 seconds.

For diagnostic purposes, the authors recommend selecting three or four average peers to observe for comparison. Selected peers and the target student are then observed in alternating 1-minute intervals. The observer rotates through each peer until all have been observed, and then returns to the initial peer. Specific guidelines for collecting observation data as well as statistical guidelines for comparing the scores of the target student to the peer composite are provided. In addition, guidelines for incorporating the ADHD-SOC into treatment evaluation procedures are also presented. Validation of the ADHDSOC is presented in several studies of school-based medication evaluation studies (see Gadow, 1993; Gadow, Nolan, Poalicelli, & Sprafkin, 1991).

Both the BOSS and the ADHDSOC are relatively simple school-based observation codes to learn and use. They offer the opportunity to assess both within-student features of behavior (e.g., across various settings that vary with respect to task demands), and between-student features of behavior (e.g., target student as compared to peer composite). These are only two of the many coding systems available to school psychologists. Other available instruments are listed in Table 2.

General Issues in Systematic Direct Observation

CONSIDERATIONS IN SELECTION OF TARGET BEHAVIORS

Considering the Social Significance of the Behavior. In daily practice, it is not uncommon for teachers and other school personnel to describe a litany of target behaviors that present as possible candidates for change. As most school psychologists are all too well aware, to target each for observation and intervention is likely to prove time and cost inefficient in the long run. As such, assessment information gathered before systematically observing behavior (e.g., interviews) is absolutely crucial to designing a sound observation strategy. In doing so, the school psychologist must determine which elements of a student's behavioral repertoire might serve as socially significant and ecologically valid target behaviors (Hintze & Shapiro, 1995).

Table 2. Other examples of school-based observation protocols

Code	*Published*	*Age group*	*Setting*	*Recording schedule*	*Length of intervals, seconds*
Systematic Screening of Behavior Disorders: Peer Social Behavior Code (Walker & Severson, 1990)	Sopris West (pre-school adaptation available[a])	Elementary	Playground	• Partial interval	10
The Preschool Observation Code (Bramlett, 1993; Bramlett & Barnett, 1993)	See references	Preschool	Classroom	• States (momentary time-sample) • Events (frequency of response)	30
State Event Classroom Observation System (Saudargas, 1997)	Available from author	Elementary	Classroom	• States (momentary time-sample) • Events (frequency of response)	15

[a] Sinclair, Del'Homme, and Gonzalez (1993).

Procedures that affect behavior of one or more persons in ways that increase the probability or magnitude of benefits for any one or all of the persons involved are considered to be socially valid targets for behavior change (Hawkins, 1986). Teaching children to read, pay attention, or make friends with peers are likely to be socially valid, because these efforts generally increase benefits and decrease costs for both the targeted individual and the rest of society (Hawkins, 1991). As such, a goal, outcome, or procedure is valid only to the extent that choosing it as a target for change improves the benefit-to-cost ratio for the individual, for others, or both. A consumer's or professional's opinion about a targeted behavior for change is only valid to the extent that it is consistent with such improved benefit-to-cost ratio (Hawkins, 1991).

Although conceptually the notion of social validity makes sense, in practice it may be difficult to operationalize. At least one objective validation strategy is to use normative data from same age peers as the target student to identify which behaviors are likely to be adaptive, and the extent to which such behaviors are expected to be mastered. For example, observing the rates of academic engaged time of peers of the target child can help establish whether or not a discrepancy is present, in addition to the magnitude of the discrepancy and goals for change (Hawkins, 1991). Similarly, observing those behaviors considered to be associated with targeted behaviors (e.g., escape or avoidance) from a normative reference group may assist in determining which behaviors are of critical importance for success (Hawkins, 1991). Finally, the best validation of which behavior is most adaptive is to test experimentally the outcomes produced by different behaviors and different levels of their performance (Hintze & Eckert, 2000). By definition, those strategies that yield the greatest benefit at the least cost are the most adaptive (Hawkins, 1986).

Prioritizing Possible Target Behaviors. In many assessment situations, decisions must be made regarding the relative priority of possible target behaviors (Hintze & Shapiro, 1995). In a review of the research, Nelson and Hayes (1979) offer four suggestions that can help guide the practitioner faced with a multitude of potential target behaviors:

1. Alter the behavior that is most irritating to the person who has identified the problem (Tharp & Wetzel, 1969).

2. Alter a behavior that may be relatively easy to change (O'Leary, 1972).

3. Alter behaviors that will produce beneficial response generalization (Stokes & Baer, 1977).

4. When behaviors exist as part of a longer response chain, alter the behaviors at the beginning of the chain (Angle, Hay, Hay, & Ellinwood, 1977).

In addition, Hawkins (1986) suggests that:

1. Targeted behaviors should be those that represent "keystone" or pivotal behaviors within a behavioral response hierarchy.

2. Behaviors that have a "general utility" should be considered prior to those with highly specific functions.

3. The construction or acquisition of behavioral response repertoires should take precedence over the pure elimination of specific behaviors.

4. Behaviors that gain a student access to reinforcement in the natural environment should be given high priority.

5. Student choice should be considered when selecting possible target behaviors.

Antecedents and Consequences of Behavior. Both naturalistic observation and systematic direct observation strategies allow the observer to examine interdependencies among functional antecedents, behaviors, and consequences (Alessi, 1988). Careful examination of such functional response chains allow practitioners to develop hypotheses such as:

1. Are there avoidance, escape, or termination behaviors evident, contingent upon requests or demands made by the teacher?

2. Does the magnitude of the behavior change as a function of varying task demands?

3. Does the target behavior lead to accessing social attention or preferred tangibles or activities?

4. Are there particular setting or temporal characteristics associated with the target behavior?

Once developed, such hypotheses can be tested experimentally in a more controlled experimental analysis of the behavior (Iwata, Dorsey, Slifer, Bauman, & Richman, 1982). By using a brief functional analysis (Wacker et al., 1990), hypothesized behavioral functions can be assessed using predetermined analogue assessment strategies. Most assessments include alone, escape, and attention conditions. During the first phase of the analysis, reinforcement (e.g., social attention, withdrawal of a demand) is provided contingent on the occurrence of the target behavior. During the second phase of the brief functional analysis each condition is replicated; however, the reinforcement contingency (i.e., escape, attention) is provided for appropriate behavior rather than inappropriate behavior. By using such a methodology allows the practitioner to validate specific A-B-C chains and target specific environmental contingencies for ongoing assessment and intervention.

SUMMARY

Significant effort has been made over the past decade to shift the role of the school psychologist from one of problem identifier to one of problem solver (Deno, 1995). With a focus on hypothesis testing and scientific accountability, the school psychologist as problem solver seeks to use assessment instruments that provide clear links between assessment and intervention. Systematic direct observation provides one of the most useful strategies for accomplishing this goal. With a focus on socially significant and meaningful behavior change, systematic direct observation changes the approach of the observer from passive to active and reflects technological advances in both the study of human behavior and how behavior is recorded and summarized. Moreover, systematic direct observation procedures are in line with the reauthorization of IDEA and current standards for test use among school psychologists.

As with any new skill, it takes time to become fluent in the use of systematic observations. School psychologists should not be fooled by its apparent simplicity and should expect to devote as much time in training to use such procedures as they typically would in learning any standardized assessment instrument. With continued use, however, school psychologists will find systematic direct observation to be a crucial component of just about any of the services they offer.

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Best Practices in Functional Behavioral Assessment for Designing Individualized Student Programs

Timothy P. Knoster
Bloomsburg University of Pennsylvania
Barry McCurdy
Devereux Institute of Clinical Training and Research

OVERVIEW

It is only 8:10 in the morning, and, once again, John is sent to the principal's office for fighting with his classmates. He passes Carmen, who has recently received her fourth disciplinary referral this week (and it is only Wednesday) for disruptive and disrespectful behavior during classroom instruction. Down the hall from Carmen's classroom, Drew's Individual Education Plan (IEP) team is scheduling yet another meeting after school to modify Drew's behavior intervention plan in response to his increasing self-injury (i.e., face slapping and scratching). Last night, the parents of four kindergarten students requested a meeting with the principal concerning a young boy's use of profanity and his intimidation of their sons or daughters.

Everyday, schools in America are faced with complex challenges related to educating increasingly diverse student populations, especially students with chronic problem behavior. Although these students typically represent a small portion of school enrollment (i.e., 1–5%), they often account for more than 50% of the behavioral incidents handled by office personnel and consume significant amounts of time (Sugai et al., 2000; Sugai, Sprague, Horner, & Walker, 2000; Taylor-Greene et al., 1997). It is also likely that many of these same students will require individualized comprehensive behavioral supports that involve family, school, and community participation (Eber, 1996; Eber & Nelson, 1997). Also, only some of these students are likely to be eligible for special education services and programs.

School psychologists are often asked by school personnel or by parents for guidance in treating these students and are in a prime position to facilitate the design and delivery of comprehensive behavior intervention plans based on functional behavioral assessment (FBA).

The specific issue of how FBA should be integrated into the special education decision-making process is a matter that must be addressed by IEP teams (Tilly et al., 1998). FBA is required in the Individuals with Disabilities Education Act (IDEA) only when students with disabilities become the subject of school discipline proceedings. Section 615(k)(1)(B)(i) of the statute states:

> Either before or not later than 10 days after taking a disciplinary action described in subparagraph (A). . . if the local educational agency did not conduct a functional behavioral assessment and implement a behavioral intervention plan for such child before the behavior that resulted in the suspension described in subparagraph (A), the agency shall convene an IEP meting to develop an assessment plan to address that behavior.

While literally accurate, such a narrow interpretation has a series of shortcomings given a broader reading of the statute. Contrarily, a rationale for a broader interpretation can be built on IDEA statutory language for implementing FBA throughout the special education decision-making process. This position stems from a series of interactions between related sections of the statute.

In particular, §614(b)(2)(A) states that in conducting full and individual evaluations for any student suspected of having a disability, "the local education agency shall use a variety of assessment tools to gather relevant functional and developmental information . . . ." While the term "functional" in this passage modifies the word "information," it is not clear how functional information could be collected as part of a full and individual evaluation outside the context of an assessment. In addition, section 614(b)(3)(D), states that "[e]ach local education agency shall ensure . . . assessment tools and strategies that provide relevant information that directly assist persons in determining the educational needs of the child are provided." Thus, regardless of what information is collected to document the presence of a disability, teams must collect information in all relevant domains where the student demonstrates educational need. So, when the requirements of §614(b)(2)(A) and §614(b)(3)(D) are read together, the following implications seem clear: If a student with a disability experiences difficulties with mobility, reading, or other related skill areas that impede learning regardless of specific disability, then a developmental and functional mobility (reading, etc.) assessment is warranted. Given this interpretation, it may then be further inferred that if behavioral issues are of concern, then a developmental and functional behavioral assessment would contribute important information as part of the full and individual evaluation.

In further support of this broader interpretation, the IEP section of the statute states a series of clear expectations that positive behavioral programming be provided to IDEA-eligible students who need it. Section 614(d)(3)(B)(i) of the statutes states that "in the case of a child whose behavior impedes his or her learning or that of others, consider, where appropriate, strategies, including positive behavioral interventions, strategies and supports, to address the behavior." The design of positive behavioral interventions, strategies, and supports are precisely the purpose for which FBA was developed (O'Neill et al., 1997). FBA procedures should be used as part of positive behavioral intervention development for students and, in particular, for students with disabilities whose behavior impedes their learning or the learning of others.

The final reference in the statute that supports the use of FBA in situations beyond discipline comes from the discipline section itself. Section 615(k)(1)(B)(i) states, "if the local educational agency did not conduct a functional behavioral assessment and implement a behavioral intervention plan . . . ." Thus, the law acknowledges the use of FBA beyond the context of the discipline section for students with disabilities who exhibit problem behavior.

In light of this broad interpretation, school psychologists can and should provide proactive leadership by advocating for, and implementing, the FBA process for all students evidencing increasingly significant problem behavior. Further, school psychologists are in a unique position to provide policy guidance in their respective educational agencies concerning promising and best practices (i.e., functional assessment). School psychologists, in responding to this opportunity, should have a thorough understanding of the inter-relationship between research, policy, and practice as it pertains to functional behavioral assessment. Specifically, current knowledge of the literature coupled with a practical understanding of school policy, as well as an understanding of factors that inhibit or enable the implementation of best practice, is required of school psychologists.

BASIC CONSIDERATIONS

Functional behavioral assessment is a problem-solving framework that leads to intervention. The decision-making process employed by an educational team does not change across settings or situations. However, the level of resources and precision needed to effectively intervene will vary based on need and the circumstances confronted by the educational team (i.e., intensity, severity, and durability of the given student's problem behavior across settings).

There are five general considerations that school psychologists should take into account when conducting FBAs in schools. These considerations are presented in Table 1.

Table 1. Basic considerations

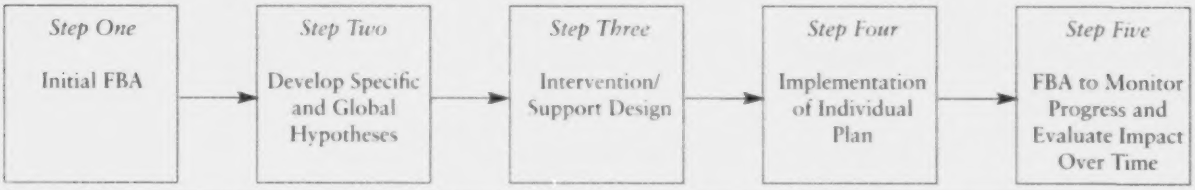
Consideration	*Implications for Practice*
FBA: Intervention link	The behavior of the focus student and others in typical routines and settings (contexts) should serve as the focal point of FBA. Information gathered through the FBA should be summarized in the form of specific and global hypotheses to drive intervention design.
FBA procedures: Continuum	No one interview or direct observational protocol will serve all situations. It is important to create the appropriate match between (a) the resource and precision of assessment and intervention procedures selected and (b) the intensity, severity, and/or durability of problem behavior (Tilly et al. 1998).
FBA: Special education decision making process	FBA (in varying degrees and form) should be conducted as a means to design effective teaching strategies for students who present behavior that impedes their learning or that of others. Therefore, FBA may be conducted at varying points in time throughout the special education decision-making process.
FBA: Critical components	Selected FBA procedures should reflect a problem solving process that will help an educational team answer four questions: • What is the problem? (Initial FBA) • Why does the problem exist? (Initial FBA) • What should be done to address the problem? (Initial FBA) • Did the intervention work and what's next? (FBA in progress monitoring)
FBA: Professional development	School psychologists must be aware of current best practices in conducting FBA and have an understanding of policy and practice implications (e.g., process skills). In particular, school psychologists are in a prime position to guide professional development for teachers and other relevant parties on FBA procedures.

FBA and the Link to Intervention

For an FBA to be functional, it must lead to the development of a plan for intervention and support that has a high likelihood of success. An important role for school psychologists is to effectively communicate this expectation among colleagues in schools.

The process of conducting an FBA involves gathering broad and specific types of information. As a standard practice this includes the use of informant methods with people who (a) know the child well, (b) work with the child on a regular basis, and/or (c) will be directly affected by the results of intervention. It is important to involve these same individuals from the onset of the initial FBA through design, implementation, progress monitoring, and program modification phases of the intervention process. Meaningful involvement by relevant parties will not only increase the likelihood that accurate and useful information is obtained, but also facilitate design and implementation of intervention and support that fit naturally occurring routines and settings (e.g., daily classroom routines). Relevant parties should participate (to varying degrees) in each of the five steps in the process, as highlighted in Table 2.

Table 2. Five step planning process for effective behavior support

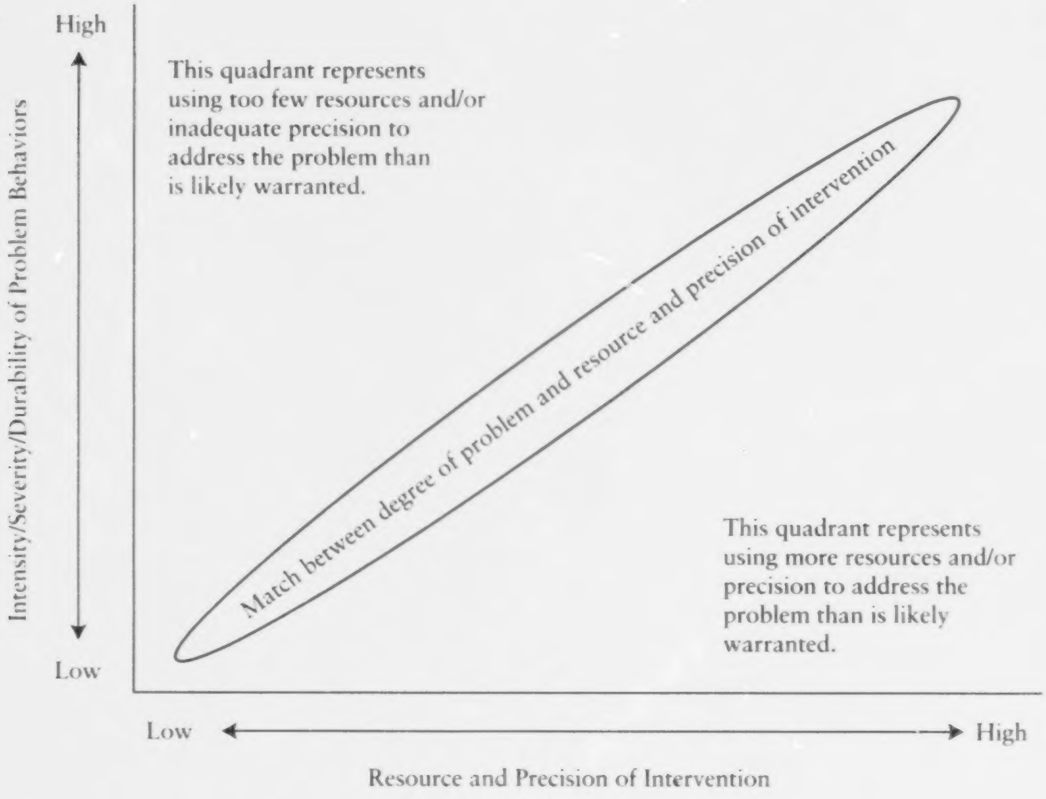

Step One
Initial FBA
Step Two
Develop Specific and Global Hypotheses
Step Three
Intervention/ Support Design
Step Four
Implementation of Individual Plan
Step Five
FBA to Monitor Progress and Evaluate Impact Over Time

FBA and the Procedural Continuum

The process of conducting FBAs can best be understood as a continuum of integrated assessment procedures that may involve a broad array of data collection tools and procedures. Determining the appropriate level of resource and precision of intervention (including FBA) should be made on a case-by-case basis in relation to the degree of need experienced by the educational team, as depicted in Figure 1.

To illustrate, mild problem behaviors (e.g., occasional and infrequent aggressive actions such as pushing other children on the playground) can be initially assessed through informant methods by simply asking teachers about the setting and circumstances under which the student is aggressive towards others and the consequences that occur after the student has been aggressive. Alternately, an educational team confronted with the need to conduct a more rigorous FBA for a student who engages in high levels of a serious problem behavior that prior interventions and supports have failed to ameliorate (e.g., chronic aggression toward other students in the form of hitting, scratching, and biting), will likely need to employ informant methods (e.g., in-depth interviews) in conjunction with more resource-intensive behavioral observations across settings and time. School psychologists, acknowledging this continuum, are in a unique position to guide team decision making by creating a conducive match between intensity/severity/durability of the student's problem behavior and mitigating circumstances and resources and precision of the assessment procedures employed to design intervention and support.

Figure 1. Conceptual relationship between degree of behavioral problem and resource and precision of intervention


High
Low
Intensity/Severity/Durability of Problem Behaviors
This quadrant represents using too few resources and/or inadequate precision to address the problem than is likely warranted.
Match between degree of problem and resource and precision of intervention
This quadrant represents using more resources and/or precision to address the problem than is likely warranted.
Low
High
Resource and Precision of Intervention

Adapted from Tilly et al., 1998.

In a practical sense, it is important to understand that student-centered teams will likely enter into the process of conducting initial FBAs at varying points in the educational decision-making process ("points of entry"). Two practical illustrations include (a) a third-grade student's persistent tantrums that have prompted a full and individual evaluation for consideration of eligibility and need for special education and (b) an eighth-grade student with an IEP for whom, as a result of Manifestation Determination, the IEP team is initiating a comprehensive functional behavioral assessment.

Given the range of possible points of entry in conducting FBAs, school psychologists are well positioned to guide educational teams in determining educational need in relation to procedural safeguards for the student and selection and use of an appropriate array of tools and procedures to gather relevant information leading to intervention (Tilly, Knoster, & Ikeda, 2000). Further, school psychologists are in an ideal position to sensitize educational teams to the impact of moving to more intensive FBA procedures in tandem with understanding the potential cost implications of more robust data collection procedures. School psychologists should guide educational teams in proceeding along this continuum in a least-to-more intrusive manner, based on student and parent preferences in relation to the success of previous interventions.

FBA and the Special Education Decision-Making Process.

Assessment and intervention for students who display behavior problems should begin at the onset of problems. FBA can be used during pre-referral intervention and in determining eligibility for, and delivery of, special education. Functional behavioral assessment is best used on an ongoing, dynamic, basis with students who display challenging behaviors, as depicted in Table 3.

Effective schools typically incorporate procedures to teach and reinforce expected behaviors and to correct inappropriate behavior. However, even in effective schools, some students will likely require a greater degree of individualization. Typically, initial interventions for this small population of students will be based on good faith and intuitive decision

Table 3. FBA throughout the special education decision-making process

Stages in the Special Education Decision Making Process	*FBA Activities*
Initial concern	• Teacher's/other's intuitive FBA as to why a particular student is exhibiting problem behavior that is based on "sensing" an increasing problem. • Intuitive decision making/intervention-prevention.
Screening/intervention	• Documentation of increasing concerns. • Failure of intuitively based interventions. • Informant methods possibly coupled with direct observation summarized in hypotheses.
Referral/full evaluation	• Continued failure of interventions based on low-tech informant methods. • More comprehensive informant methods coupled with direct observation. • Team/multiple points of input that are summarized into hypotheses.
Individual Educational Program	• Hypotheses generated from FBA serve as focal point for selection of intervention/supports. • Multi-component individualized behavior intervention plan for students whose behavior impedes their learning or that of others.
Progress monitoring and program modification	• Extend methods used during initial FBA to monitor progress. • Assess impact of intervention/supports on reductions in problem behavior, increases in acquisition and use of socially acceptable alternative skills, impact on lifestyle factors, and social validity/consumer satisfaction. • Assess environments in which to teach generalization of alternative skills and to transport necessary supports and interventions.

making. Increasingly, systematic screening and intervention procedures should be employed in instances where intuition-based interventions fail to produce desired results. Screening-level FBA and interventions usually place greater emphasis on preventative strategies in light of identified antecedents (fast triggers) and setting events (slow triggers) that adversely influence student behavior (Knoster & Llewellyn, 1998). The decision as to whether a student should be referred for a full and individual evaluation depends, at least in part, on the student's response to intervention during the screening stage.

FBA serves as a viable assessment process and is based on the requirements for full and individual evaluations in the IDEA. One provision in IDEA regarding lack of instruction is particularly important. Effective instruction for students with problem behaviors includes appropriate academic instruction and individualized behavioral intervention. In essence, the initial evaluation team must appraise the extent to which an appropriate program was in place and whether it was implemented effectively with the particular student.

The evaluation team, in conducting an FBA as part of the full and individual evaluation, provides evidence as to whether the student has a disability and needs special education. A student's response to intervention is a critical indicator of disability and the degree to which special education services are needed (Gresham, 1984, 1991). Students who make little or no progress despite support in general education, or who need extraordinary interventions, may be deemed as needing special education services and programs.

The design of an IEP for a student with problem behavior typically begins with the behavior intervention plan. Behavior intervention should be a part of the IEP if the student's behavior (a) interferes with learning (the student's or others), (b) is a result of an emotional disturbance, (c) persists despite documented interventions, (d) is a risk to safety (the student's or others), (e) results in repeated disciplinary actions that constitute a pattern, or (f) may result in a more restrictive intervention and placement (Tilly et al., 1998).

The identification and selection of well-matched strategies to address the student's needs is accomplished by the IEP team in relation to specific and global hypotheses (Bambara & Knoster, 1995, 1998). Hypotheses summarize assessment results in the form of plausible reasons for the student's problem behavior(s) and provide a foundation from which to logically link interventions addressing (a) short- and long-term prevention strategies, (b) socially acceptable alternative skills, and (c) responses to problem behaviors (including crisis management).

Monitoring student progress toward desired outcomes by IEP teams is required in IDEA. Therefore, IEP teams should employ a similar combination of informant methods and/or direct observation procedures utilized during the initial FBA to monitor progress. Thus, FBA procedures are extended into the progress-monitoring phase of IEP implementation. When extending FBA procedures to evaluate the effectiveness of a behavior intervention plan, school psychologists should guide the IEP team to consider four important questions. First, what type of information is needed to evaluate specific intervention components? Second, how will the IEP team collect this information? Third, how will the IEP team use the information to make decisions? Fourth, how will the IEP team communicate those decisions, to whom, and in what time frame? (Bambara & Knoster, 1998).

FBA Critical Components

School psychologists can significantly influence how FBAs are implemented in school programs. First, the role of the school psychologist in guiding the assessment process can directly influence how students are instructed (i.e., functional assessment). Second, school psychologists, as a result of their expertise in informant methods and direct observational procedures, can influence what information is collected and how that information is used (i.e., gathering information and forming hypotheses). Therefore, it is important for school psychologists to have a thorough understanding of the critical components of FBA, as depicted in Table 4.

It is important to understand the relationship between each critical component of the FBA process and subsequent educational team-related activities associated with intervention. To effectively guide school-based teams in conducting FBAs, school psychologists will need to have a thorough understanding of assessment and intervention practice as well as efficient strategies to engage student support team members in each step of process depicted in Table 4.

Table 4. Critical components of FBA

Step in the Problem Solving Process	*Critical Component of FBA*
Problem identification	• All relevant parties participate (i.e., those who know the student, work with the student, and/or will be affected by results of intervention). • All relevant information is considered. • Problem behaviors are operationally/environmentally defined. • Appropriate resources and precision in intervention is determined in relation to the degree of need presented.
Problem analysis	• Multi-method/multi-informant procedures are employed. • Specific and global hypotheses formulated.
Plan development	• Individualized, multi-component behavior support plan devised that 1. Focuses on measurable outcomes 2. Is based on hypotheses 3. Identifies roles and responsibilities of staff 4. Identifies progress monitoring procedures 5. Identifies necessary supports for school personnel 6. Represents a good contextual fit/social validity
Intervention and evaluation	• Progress monitoring occurs in terms of both fidelity of intervention and impact on student behavior. • Trends in student performance are analyzed. • Ineffective interventions/strategies are modified based on hypotheses. • Interventions/supports are modified to meet emerging needs. • Impact measures are taken concerning behavioral changes, impact on broad lifestyle factors (i.e., quality of life), and consumer satisfaction.

FBA and Professional Development

While the professional development implications for school psychologists relevant to FBA include a thorough understanding of methodologies for data collection, expertise is also required in understanding efficient methods of supporting educational team members in participating in each phase of intervention. Table 5 highlights professional development implications related to FBA for school psychologists.

A comprehensive training curriculum promotes the development of a range of technical skills and competencies focused on creating individualized, assessment-based, interventions that not only improve behavior but also enhance overall quality of life (Dunlap et al., 2000). As can be seen in Table 5, it is important for school psychologists to develop expertise in both the content/practice of FBA and in the process skills as they relate to educating students with problem behavior.

BEST PRACTICES IN FUNCTIONAL BEHAVIORAL ASSESSMENT

A Model for Understanding Behavior in School Settings

School psychologists are well trained to conduct assessments to determine eligibility for special education services. However, assessment for the purpose of addressing student problem behavior requires a different approach, one that is inextricably linked to the intervention process in a formative manner (Lentz & Shapiro, 1986). Functional behavioral assessment refers to a range of strategies intended to identify the variables that influence behavior in the natural environment. The purpose of FBA is to assist school-based teams in identifying the function of problem behavior and to use this information in the design and delivery of a behavior support plan (Horner, 1994; Lewis & Sugai, 1996a; O'Neill et al., 1997). In the process of conducting an FBA, specific antecedent

Table 5. FBA professional development implications for school psychologists

Skill Domain	*Competencies*
Content/practice	• Demonstrates understanding of best practice in the quantification and summarization of student behavior and environmental factors in conducting FBAs. At a minimum, these quantification procedures must include informant methods and direct observational procedures. • Gathers relevant information regarding the student, environments, and problem behavior in a time efficient manner. • Versed in collecting broad (global) and specific information by using a variety of methods. • Translates broad and specific information collected through FBAs into specific and global hypotheses. • Designs interventions with team members that are based on specific and global hypotheses. • Understands, and guides, educational teams in conducting FBA within context of progress monitoring procedures. • Graphically displays data for team interpretation. • Efficiently communicates how effective practice in FBA affects school policy and practices.
Process	• Assesses and effectively influences environmental inhibitors for educational team members as they relate to conducting FBAs and effectively intervening with students. • Collaborates with staff, families, and the student (where appropriate) to design and implement interventions that are derived from hypotheses and create a good contextual fit for the student and the student's support team. • Understands and guides implementation of FBA within context of progress monitoring procedures. • Facilitates effective communication and problem solving among team members.

and consequent events are identified and the relationship of these events to the problem behavior is defined. The FBA is considered complete when (a) the problem behavior is operationally defined, including descriptions of response classes and the sequence of behavior; (b) the antecedent events that predict the occurrence and nonoccurrence of target behaviors, including the influence of establishing operations, are identified; (c) the consequent events that maintain problem behaviors are specified; (d) the hypotheses specifying the setting events, immediate antecedents, and function of the problem behavior are developed; and (e) the direct observational data are collected to provide correlational support for the hypotheses (Bambara & Knoster, 1995; Horner, 1994; Horner, O'Neill, & Flannery, 1993; Kennedy & Itkonen, 1993; O'Neill et al., 1997).

When conducting FBAs in schools, school psychologists have the freedom to choose from a number of assessment strategies to meet the varied demands of the situation. These strategies are encompassed within three general methods, or stages, of the FBA process that vary in intensity and yet are designed to be accumulative of the information collected at each stage. The methods include (a) informant methods, (b) direct observational methods, and (c) experimental or functional analysis (Iwata, Dorsey, Slifer, Bauman, & Richman, 1994; O'Neill et al., 1997; Vittimberga, Scotti, & Weigle, 1999).

Informant Methods

Informant methods refer to indirect measures of behavior that may include the use of questionnaires, checklists, behavior rating scales, and interviews. Informant methods are just that—methods by which one individual or a group share information, in verbal or written form, about the behaviors of a student. Informant methods, although pragmatically useful in a school setting, rely on subjective impression as opposed to observation, which is considered to be more objective and, as such, have been criticized for their psychometric qualities, including inter-rater reliability and predictive validity (Shapiro, 1987). On the other hand, data collected through checklists, behavior rating scales, and interviews typically provide more behaviorally precise information than personality measures and offer opportunities for empirical validation through direct observation.

QUESTIONNAIRES, CHECKLISTS, BEHAVIOR RATING SCALES

There are a large number and wide variety of checklists and behavior rating scales that may be employed as measures of student behavior. These measures are typically used as screening instruments in that they provide useful information and a focus for later interviews. Checklists and behavior rating scales may include simple descriptions of behavior, normative- and criterion-referencing, or even broad and narrow band empirically derived factors. However, to be most useful in the functional assessment process, checklists providing the most precise behavioral descriptors are preferred.

Checklists and behavior rating scales are paper-and-pencil measures usually completed by a teacher or parent and, at times, by the individual student. These measures typically require that informants endorse discrete behaviors from a larger list and/or provide a rating (Likert-type) with regard to the level of acceptability or intensity of the behavior.

There are a number of advantages associated with the use of checklists and behavior rating scales (Merrell, 2000). First, such measures are economical with regard to completion time. Checklists and behavior rating scales usually contain explicit instructions and may be left with teachers or parents for later completion. Second, many of the checklists or behavior rating scales sample low frequency, but significant, behaviors that are not often identified through direct observation (e.g., aggressive and assaultive behaviors). Third, data from checklists and behavior rating scales are more reliable than that obtained through unstructured interviews. Finally, checklists and behavior rating scales provide a comprehensive sampling of behavior, capitalizing on the judgments and observations of those who are familiar with the student in question and have had ample opportunities to observe the student in context over a specified period.

Along with advantages, Shapiro (1987) cites a number of limitations to the use of checklists and behavior rating scales. These limitations often include biases imposed by the indirect measurement format. Most notable are (a) the information obtained may be subject to the demand characteristics, social desirability, and expectations of the respondent; (b) the data are often retrospective; and (c) the information obtained may be influenced by subjective opinion. Nevertheless, checklists and behavior rating scales are considered valuable screening measures.

Two measures of recent development depart slightly from the traditional format for checklists and rating scales: informants are used to rate a singular behavior and to summarize the data across "behavioral functions." The Motivation Assessment Scale (MAS) (Durand, 1990) is a questionnaire designed to identify occurrence patterns for specific behaviors. For each identified target behavior (e.g., hand biting) the informant responds to a series of 16 questions addressing the conditions that may or may not be associated with the behavior. Responses are then summarized according to the perceived function served by the behavior (i.e., sensory, escape, access attention, and access tangible). Durand and Crimmins (1988) report relatively high inter-rater (.80–.95) and test-retest (.89–.98) reliability coefficients for this measure. As well, a strength of the scale is that predictive validity measures were obtained by comparing teachers' ratings on the MAS with students' behaviors observed in analogue assessment conditions. In all cases, teachers' ratings predicted performance in the analogue assessment. It should be mentioned, however, that all psychometric evaluations conducted with the MAS involved students with severe mental retardation or autism who engaged in high rates of self-injurious behavior (Durand, 1990; Durand & Crimmins, 1988).

Similar to (and adapted from) the MAS, the Problem Behavior Questionnaire (PBQ) (Lewis, Scott, & Sugai, 1994) is a 15-item measure designed to assess the degree to which a specific problem behavior is influenced by teacher attention, peer attention, or the occurrence of environmental events. The PBQ is designed as a screening tool to identify initial hypotheses about behavioral function for students with mild learning and behavior problems. The tool is limited, however, in that there has only been one attempt to demonstrate its predictive validity.

INTERVIEWS

The purpose of the interview in the FBA process is to narrow the range of factors that influence problem behavior (Horner & Carr, 1997; Schill, Kratochwill, & Gardner, 1996). The interview is a valuable tool for "contextualizing" problem behavior, identifying clearly associated environmental events, and dismissing those variables not likely associated with the behavior of concern. Interviews may be structured, semi-structured, or open-ended, may involve the interviewer and interviewee, or may be completed as a self-interview process. Most importantly, the person interviewed should have direct contact with and knowledge about the student and the student's behavior.

Interviews are one of the more frequently employed techniques in behavioral assessment. There is evidence to suggest that the inter-rater reliability and criterion-related validity of behavioral interviewing is adequate, with the exception of interviews conducted with children (Gresham, 1984). The psychometric qualities of behavioral interviews improve with training and structure (Bergan, 1977; Bergan & Kratochwill, 1990; Bergan & Tombari, 1975). As with all indirect measures, behavioral interviews rely on the subjective impressions of others, which can be influenced by recent and/or salient events (Horner & Carr, 1997).

According to O'Neill et al. (1997), the four main outcomes to be achieved through behavioral interviewing include (a) a complete description of the problem behavior, (b) the identification of antecedent events (including internal processes) that may predict the occurrence and non-occurrence of the problem behavior, (c) the identification of behavioral functions based on maintaining consequences, and (d) the development of summary statements (i.e., hypotheses) to describe the relationships between the problem behavior and associated environmental events. This information can be obtained by school psychologists through the behavioral interviewing process. One sample format for conducting a behavioral interview is the Problem Identification Interview (PII), developed and evaluated by Bergan and colleagues (Bergan, 1977; Bergan & Kratochwill, 1990; Bergan & Tombari, 1975). In conducting the PII, school psychologists request information about antecedent, sequential, and subsequent events surrounding problem behavior. Following from the PII, the Problem Analysis Interview (PAI) is then conducted to validate the problem based on the collection of baseline data and to clarify the behavioral sequence of events, including those factors maintaining the behavior of concern (Schill et al., 1996). From this information, hypotheses about the function of problem behavior are formulated and an intervention plan is developed.

The Functional Assessment Interview (FAI) (O'Neill et al., 1997) is one of the more comprehensive structured behavioral interviews developed. The FAI consists of 10 separate sections, any or all of which may be incorporated into the interview. The FAI differs from Bergan's (1977) PII and PAI formats in that, in addition to clearly defining the target behavior and the events surrounding the behavior, the FAI requests information about the efficiency of the problem behavior (i.e., how readily it leads to reinforcement for the individual), possible functionally equivalent alternative behaviors, and the history of previous interventions. Upon completion, the interviewer is provided with a model to integrate information into "summary" statements or hypothesis statements.

When FBA is used to address the problem behaviors of students, the students themselves may be actively included in the process. Several researchers have examined the possibility of using students as key informants (Kern, Dunlap, Clarke, & Childs, 1994; O'Neill et al., 1997; Reed, Thomas, Sprague, & Horner, 1997). Structured, student-based interviews, including the Student-Assisted Functional Assessment Interview (Kern et al., 1994) and the Student-Directed Functional Assessment Interview (O'Neill et al., 1997; Reed et al., 1997), have been used to gather information from students. Although the psychometric integrity of student-based interviews remains questionable (Gresham, 1984), perhaps the greatest advantage lies in the possibility of discovering unforeseen maintaining consequences, alternative behaviors to be reinforced, or even potential reinforcers. Since the student-based interview process only takes an average of 20–40 minutes, the time may be well spent.

Once interview data have been collected and summarized, it is a good idea to compare information collected across informants. In qualitative research design, this process is known as "triangulation" and is used to corroborate information collected from different sources (Van Acker, 1999; Wiersma, 2000). Given the concerns regarding the reliability and validity of indirect assessment, triangulation helps to ensure the sufficiency of the data collected. When there is little convergence, or agreement, across data sources, additional and more rigorous assessment may be required.

THE INITIAL LINE OF INQUIRY (ILI)

One example of using informant methods to develop initial strategies to intervene on student problem behavior is the ILI (Knoster & Llewellyn, 1998; Lohrmann-O'Rourke, Knoster, & Llewellyn, 1999). The ILI resulted from a collaboration between the

Tri-State Consortium on Positive Behavioral Support (including the states of Pennsylvania, Virginia, and West Virginia) and the Instructional Support System of Pennsylvania, and is used as an initial screening tool for identifying and analyzing patterns of problematic student behavior. The process relies on a team-based interview, which may include several concerned individuals in addition to the child (e.g., teachers, counselors, and administrators as well as family members,, and/or representatives from community agencies). A facilitator, typically a member of the core team who is knowledgeable about the ILI process (e.g., the school psychologist), leads the team through a discussion regarding the relevant factors influencing the child's behavior, including (a) setting events or slow triggers, (b) behavioral antecedents or fast triggers, and (c) behavioral consequences (Lohrmann-O'Rourke et al., 1999). Throughout the process, emphasis is placed on user-friendly language and helping team members to reach consensus.

The facilitator uses a flipchart that is organized with columns to record information. Most times the process can be completed in one session of 60–90 minutes. Occasionally a second session is required. The process ends when the team identifies relevant factors related to the child's problem behavior and generates specific and global hypotheses about behavioral function. Team members then brainstorm a variety of support strategies, selecting those that appear to hold promise for resolving the situation while providing the best contextual fit.

The ILI, like other informant methods, is not intended to replace more comprehensive assessment strategies but, instead, should serve as a good starting point from which initial hypotheses leading to intervention may be developed. In general, when data collected primarily through informant methods is insufficient for hypothesis generation, school psychologists should move to the next stage of information gathering; that is, descriptive or direct observation.

Direct Observation Methods

Conducting a direct observation of the student in the natural setting is often necessary in order to develop and refine hypotheses about problem behavior (O'Neill et al., 1997). In particular, when data from informant methods are inconclusive, the development of hypothesis statements will be dependent upon direct observational data.

EVENT RECORDING

Methods of implementing direct observation vary along a continuum of structure and complexity. Less structured direct observations may be carried out by teachers and other classroom personnel by asking them to record each occurrence of the behavior.. Adding information about antecedent and subsequent events surrounding the target behavior enhances the data without necessarily complicating the collection process. There are myriad forms for event recording described in the literature. Figure 2 shows one example of a simple event recording form designed to capture information about the target behavior, including the time of occurrence, antecedent, and consequent information.

Another event recording tool that is easily used in a classroom setting is the scatter plot. Use of the scatter plot facilitates the identification of broader environmental events that may occasion problem behavior (e.g., lunch time) and helps to identify an individual's pattern of responding across time (Touchette, MacDonald, & Langer, 1985). Observers record when, during the day, the problem behavior occurs and, once a pattern of occurrence is defined, hypotheses about setting events and specific antecedents are developed. The scatter plot can be adapted to assess the behavior of students in both general and special education programs for a full day, or portions of the day. Figure 3 shows an adapted version of the scatter plot for use in a single classroom setting.

The Functional Assessment Observation Form (FAO) (O'Neill et al., 1997) is one of the more comprehensive tools utilized by teachers or others to organize observational data. The format allows for the recording of behavioral events as well as contextual information (e.g., antecedents and actual consequences). Like the scatter plot, the FAO may be utilized in one or in several different classrooms. It is designed to capture information on one or more behaviors and leads to a summary of the data, including predictors and perceived functions. With all information captured on a single, standard form, data can be collected across several days and summarized for further analysis.

Figure 2. A-B-C event recording form

A- B - C Event Recording Form

STUDENT ____________________ BEHAVIOR ____________________

OBSERVER ____________________ CLASS ________________________

Mark each time the behavior occurs. Baseline ______ Intervention ______

Time	Antecedent	Consequence

Comments:

DESCRIPTIVE ANALYSIS.

A somewhat more complex, yet highly informative, method of collecting direct observational data is through descriptive analysis. A descriptive analysis examines the natural covariation between problem behavior and antecedent/setting and consequent events (Mace, Lalli, & Lalli, 1991). Data from a descriptive analysis highlights potential functional relationships between problem behavior and environmental events, leading to hypothesis development.

Conducting a descriptive analysis in the school setting requires the services of a school psychologist who is adept at conducting structured observations. Although the task can be time consuming, there are several advantages to this form of direct observation, including (a) the opportunity to identify naturally occurring antecedents and/or reinforcers not previously identified via informant methods and (b) the possibility of creating more contextually appropriate analogue conditions should an experimental analysis be required in the future (Mace et al., 1991).

Perhaps the most common form of descriptive analysis is a method involving the continuous recording of naturally occurring antecedent, behavior, and consequent events. Known as anecdotal or A-B-C

Figure 3. A 30-minute interval scatter plot assessment for behavioral event recording across the school day

Student: ____________________ Behavior: ____________________

☐ ____________ ⧄ ____________ ■ ____________ Date: ________

Date																												
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recording, this form of descriptive analysis is designed to provide information about the target behavior, as it occurs in context, and associated antecedent and subsequent events (Bijou, Peterson, & Ault, 1968; Cooper, 1981; Cooper, Heron, & Heward, 1987). Anecdotal recording results in a narrative description of events rather than a frequency count of behaviors. Anecdotal recording requires the full attention of the observer. Generally, anecdotal recording is carried out for short time periods (20–30 minutes), several times weekly, until a clear picture of the behavior and contextual influences emerge.

Several researchers have examined the use of descriptive analysis methods yielding data in the form of conditional probabilities (Gunter, Jack, Shores, Carrell, & Flowers, 1993; Mace et al., 1991; Repp, 1999; Shores et al., 1993; Shores, Wehby, & Jack, 1999). Conditional probabilities reflect the degree or extent to which a particular target event occurs relative to another given event (Bakeman & Gottman, 1986). For example, a conditional probability establishes the likelihood that disruptive behavior (i.e., target event) follows hand raising (given event) for a particular student in a classroom setting (Gunter et al., 1993).

Mace et al. (1991) incorporate an open-ended format for descriptive analysis. Target behaviors are identified and observed, using a 10-second recording interval, while antecedent and subsequent events are identified and recorded during the observation process. Conditional probabilities, then are calculated by expressing the percentage of intervals in which a particular antecedent event (i.e., given event) is followed (within two intervals) by a particular behavior (i.e., target event) or the percentage of intervals in which a particular behavior (i.e., given event) is followed by a particular subsequent event (i.e., target event). Figure 4 shows a sample form for the collection of descriptive data using the method described by Mace et al. (1991).

Shores et al. (1999) as well as Repp (1999) differ slightly from Mace et al. (1991) by incorporating the use of pre-established codes for recording behaviors and antecedent/subsequent events. In their model of naturalistic functional assessment (NFA), Repp and colleagues first operationally define the behavior of concern, then conduct simple, non-structured observations of the student in context, noting the antecedents and consequences for each target behavior(s). Once identified, a code is developed that includes the target behavior (and appropriate alternative behavior), antecedent events (and their opposites), and consequent events, which are typically related to standard functions of behavior (escape/avoidance, attention, sensory regulation). Like Mace et al., observations conducted in the natural environment yield conditional probabilities, summarizing the percentage of intervals in which the target behavior follows specific antecedents and precedes specific consequences.

Direct observation of a student's behavior in the natural environment is an important component of the FBA process because it provides correlational support for hypotheses generated about the behavior of concern. School psychologists must be knowledgeable about, and facile with, direct observational methods. In cases where it becomes necessary to conduct an experimental analysis to determine behavioral function, a prior direct observation, or descriptive analysis, may help the school psychologist to formulate more contextually appropriate experimental conditions.

EXPERIMENTAL ANALYSIS

Experimental, or functional, analysis is a process that involves the systematic manipulation of environmental variables, under contrived or analogue conditions, to determine the variable's effect on problem behavior (O'Neill et al., 1997). The original methodology of functional analysis was pioneered by Iwata et al. (1982, 1994) in the treatment of self-injurious behavior.

Early research efforts exploring the utility of functional analysis focused exclusively on individuals with mental retardation. These early studies clearly demonstrated that problem behavior serves a function for the individual (in some cases multiple functions) maintaining and strengthening the behavior through (a) positive reinforcement, (b) negative reinforcement, and/or (c) stimulation/sensory regulation (Mace et al., 1991; Repp, 1999). Since these early efforts, numerous studies have replicated and extended the work in functional analysis to other populations and problem behaviors.

Until recently, functional analysis has been exclusively implemented in clinical settings. Given the importance of this work, there is much interest in implementing functional analysis in schools. However, constraints imposed by a non-clinical setting limit the viability of conducting an experimental analysis of student behavior. These limitations include the time, expertise, and expense of implementing analogue conditions, including the time to identify and plan the conditions, ethical concerns regarding manipulations (e.g. withdrawal of intervention), and the expense of using additional personnel as observers, confederates, and, in extreme cases (e.g., self-injury), to help in ensuring the student's safety. Moreover, for students who display more complex learning and social behavior, such as students in general education, there is also the concern that controlled manipulations of environmental events, via analogue assessment, would likely result in a high degree of subject reactivity yielding little useful information. Peer attention, for example, is one variable that often serves to reinforce student problem behavior yet is difficult to capture and assess in a contrived assessment situation (Broussard & Northup, 1995; Dunlap et al., 1993; Haring, 1992; Lewis & Sugai, 1996b; Northup et al., 1995).

Figure 4. Sample descriptive analysis data sheet designed for continuous 10-second partial-interval recording

DESCRIPTIVE ANALYSIS DATA SHEET

10 SECOND INTERVALS	1:1	1:2	1:3	1:4	1:5	1:6	2:1	2:2	2:3	2:4	2:5	2:6	3:1	3:2	3:3	3:4	3:5	3:6	4:1	4:2	4:3	4:4	4:5	4:6	5:1	5:2	5:3	5:4	5:5	5:6
Antecedent Events																														
1.																														
2.																														
3.																														
4.																														
5.																														
* Responses*																														
1.																														
2.																														
3.																														
4.																														
Subsequent Events																														
1.																														
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3.																														
4.																														
5.																														

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However, despite these concerns, there are times when experimental analysis is necessary, including (a) when plausible hypotheses cannot be formulated based on informant or descriptive approaches and (b) when it is absolutely necessary to have a precise understanding of the nature of the problem behavior, including when, where, and, most importantly, why the behavior occurs (O'Neill et al., 1997). The latter situation is most likely to be encountered when the problem behavior is extreme (e.g. self-injury).

There are two basic approaches to conducting an experimental, or functional, analysis: (a) manipulating structural or antecedent events including instructions, directions, the presence of particular individuals, and/or the absence of all other individuals (i.e., leaving the student alone); and (b) manipulating consequent events, including contingent attention or contingent escape from the demand or task (O'Neill et al., 1997). There are also standard single-case designs that have been employed, including the withdrawal (ABAB) design and the alternating treatments design (Barlow & Hersen, 1984). In the standard model of functional analysis, observations are conducted across several sessions until a clear pattern emerges showing differences in the rate of problem behavior based on condition. However, one of the difficulties associated with this model is the number of observations required that can easily extend to more than 10 per condition depending on data variability and overlap. Recently, an alternative model of conducting functional analysis—brief functional analysis—has been developed and tested as a viable option for applied settings such as schools.

In an early study to explore the feasibility of brief functional analysis, Cooper and associates (Cooper, Wacker, Sasso, Reimers, & Donn, 1990) developed and implemented the model with eight children of normal intelligence, ranging in age from 4 to 9 years, referred to an outpatient diagnostic unit for disruptive behavior. Results showed that for seven out of the eight children, the percentage of appropriate and problem behavior varied substantially based on the assessment condition. Conditions were designed to evaluate the effects of different task demands (easy versus difficult) and parental attention (attention versus no attention). All children were assessed within a time span of 90 minutes, and treatment recommendations were rated by parents as both effective and acceptable.

Replicating and extending the work of Cooper et al. (1990), Northup et al. (1991) evaluated the aggressive behaviors of three individuals with severe disabilities who were referred to an out-clinic service for aggressive and self-injurious behavior at the University of Iowa. Results of the analogue assessment identified clear maintaining contingencies for the target behaviors. The treatment condition, then, was designed to produce that same contingency only for the occurrence of a specific alternative behavior (i.e., contingency reversal). Substantial reductions in aggressive behavior across all individuals were observed during each of the contingency reversal conditions.

The results of Cooper et al. (1990) and Northup et al. (1991) show promise for the implementation of experimental analysis in school-based settings where school psychologists and other personnel have limited time to conduct assessments. However, despite the advantage of time efficiency, conducting brief functional analyses in schools will necessitate that certain conditions be met. For example, because of the short time frame for assessment, the target behavior should occur at a steady and high frequency. Also, analogue conditions should be planned incorporating antecedent or consequent events that will have an immediate impact on the behavior of concern. Finally, school psychologists planning to conduct a brief functional analysis of behavior should be sufficiently skilled in the process to plan and readily adjust analogue conditions as necessary (Cooper et al., 1992; Derby et al., 1992; Vollmer & Northup, 1996).

Hypothesis Development and the Competing Behavior Model

The process of conducting an initial FBA culminates in the development of plausible hypotheses designed to explain the reason for the student's problem behavior. Although considered an important component of the process, hypothesis development is often overlooked by teams (O'Neill et al., 1997). Hypothesis statements are based on the results of the FBA and may emerge at any point in the FBA process. There may be several hypothesis statements developed for each problem behavior. Generally, hypothesis statements are of two types, specific and global (Bambara & Knoster, 1995, 1998).

Specific hypothesis statements are derived from interview and/or observational data. They offer an explanation of the student's problem behavior by identifying the behavioral antecedents and consequences surrounding the behavior. Specific hypothesis statements are developed for each major predictor and for each behavior or class of behaviors serving the same function (O'Neill et al., 1997). Components of a specific hypothesis include statements about (a) distal setting events (slow triggers), (b) immediate antecedents (fast triggers), (c) problem behavior, and (d) maintaining consequences (i.e., function served). Figure 5 shows an example of specific hypothesis statements developed for different predictors, behaviors, and consequences for one student.

Figure 5. Specific hypothesis statements accounting for different predictors, behaviors, and consequences for one student

HYPOTHESIS STATEMENTS FOR EACH MAJOR PREDICTOR AND/OR CONSEQUENCE

Distant Setting Event	*Immediate Antecedent (Predictor)*	→	*Problem Behavior*	→	*Maintaining Consequence*
More likely if no breakfast	When Curtis is asked to complete difficult or nonpreferred math and reading tasks		He will yell obscenities and/or throw objects		In order to escape from the tasks
No identified distant setting event	When a peer has a toy or item that Curtis wants	→	He will pinch and/or scratch the peer	→	To try to get the person to give him the toy or item
More likely if he got little attention earlier in the day	During group work or other situations in which he is receiving little attention	→	Curtis will call out a teacher's name and/or pound and slap his desk	→	To attempt to obtain attention
More likely if mother and father (during transition related to visitation) had a verbal argument in front of Curtis	Two students or two adults arguing in front of Curtis at school	→	Curtis will scream at and grab one or both people arguing	→	In order to get them to stop arguing

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Global hypothesis statements offer broad explanations for problem behavior and may be more useful for long-term planning (Bambara & Knoster, 1995, 1998). Global hypotheses serve as summary statements that describe the influence of lifestyle, medical issues, and learning history, among other factors, on the student's behavior. This information is usually obtained through the interview process (see the FAI) or through a review of records. Attention problems, communication deficits, medication side effects, and physical and/or mental illness are all conditions that may be described in global hypothesis statements. The long-term prevention of student problem behavior can be addressed by carefully considering the influence of any of these conditions on the behavior of concern. Figure 6 shows an example of a global hypothesis relevant to the same student example depicted in Figure 5.

Hypothesis statements are fundamentally important to the design of the behavior support plan. The competing behavior model, as described by O'Neill et al. (1997) makes use of specific hypothesis statements to identify the desired behavior or "replacement" skills that may serve the same function for the individual. School psychologists skilled in the use of behavioral procedures understand that plans developed for the sole purpose of reducing problem behaviors, without targeting an increase in socially acceptable alternative skills (i.e., functionally equivalent behavior, academic and social skills, and coping/tolerance skills), are not likely to be successful nor promote durable change.

SUMMARY

Functional behavioral assessment is a problem-solving framework that leads to intervention. While required under the IDEA for students with disabilities whose behavior impedes learning, FBA has broader application. School psychologists are in a unique position to guide student-centered teams in applying FBA in schools (inclusive of the special education decision-making process). In conducting FBAs, one interview or direct observational procedure will not serve all situations (no one size fits all). School psychologists should guide teams to select appropriate assessment and intervention tools and procedures in relation to the intensity, severity, and durability of student problem behavior(s).

There are three related approaches to conducting FBAs (informant methods, direct observation, experimental analysis). Various tools and procedures exist within these three approaches that can be imbedded within the continuum of assessment procedures in schools. Functional behavioral assessment can help educators and families to (a) identify the problem behavior; (b) analyze the problem; (c) develop a plan of intervention and support; and (d) intervene, evaluate, and modify the plan of intervention as warranted. School psychologists, when addressing these four components of FBA, must have skills in both the practice of gathering information and the process of constructively engaging other team members important to the process of intervention design and implementation. School psychologists, through their

Figure 6. An example of a global hypothesis

Global Hypothesis: Curtis

Curtis is 7 years old and has been identified as having a specific learning disability in reading coupled with records indicating increasingly problematic behavior. He receives most of his IEP in general education classrooms with itinerant services for reading. Curtis enjoys physical activities (particularly soccer and baseball) as well as playing video games (e.g., Nintendo). Curtis performs best in a structured classroom environment. He seems to have the most difficulty in environments with less structure (e.g., cafeteria, playground). Curtis has had difficulties in establishing relationships with his peers since his arrival at King Elementary School 7 months ago. He lives with his mother and younger brother David. Curtis does have contact with his father (who lives nearby) on weekends and occasionally during the week, based on his father's work schedule. His mother and father are in the process of a divorce. Curtis' problem behaviors generally appear related to his difficulty in gaining attention and/or resolving or escaping difficult situations, disputes, or conflicts in a socially acceptable manner.

endeavors in conducting FBAs, can have a positive influence on policy and practice in school systems by ensuring a direct link between assessment and intervention with students who present problem behavior.

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This resource can be used to guide student-centered school-based teams in designing and implementing effective intervention and supports. The booklet is organized chronologically and begins with conducting an FBA, proceeds through intervention design and implementation (inclusive or progress monitoring), and then concludes with a discussion of commonly asked questions.

Cooper, L. J., Wacker, D. P., Sasso, G. M., Reimers, T. M., & Donn, L. K. (1990). Using parents as therapists to evaluate appropriate behavior of their children: Application to a tertiary diagnostic clinic. *Journal of Applied Behavior Analysis, 23,* 285–296.

This article describes the process of conducting a brief functional analysis of eight children with "conduct-type" behaviors in an outpatient setting. Experimental conditions varying task demand (easy versus hard) as well as parental attention are described in detail. Graphic displays show the performance for each subject. The article concludes with a discussion of the advantages of using brief functional analysis and potentially valuable extensions of this work.

O'Neill, R. E., Horner, R. H., Albin, R. W., Sprague, J. R., Storey, K., & Newton, J. S. (1997). *Functional assessment and program development for problem behavior: A practical handbook.* Pacific Grove, CA: Brooks/Cole.

The majority of this book is devoted to strategies that are considered a part of functional behavioral assessment rather than functional analysis. It provides a number of efficient and effective strategies for practitioners and families to employ across school, home, and work settings.

65

Best Practices in Social Skills Training

Frank M. Gresham
University of California-Riverside

OVERVIEW

The ability to interact successfully with peers and significant adults is one of the most important developmental accomplishments of children and youth. The degree to which children and youth are able to establish and maintain satisfactory interpersonal relationships, gain peer acceptance, make meaningful friendships, and terminate negative or pernicious interpersonal relationships defines social competence and predicts adequate long-term psychological and social adjustment (Kupersmidt, Coie, & Dodge, 1990; Parker & Asher, 1987).

The importance of social competence is particularly salient for students demonstrating significant deficits or delays in cognitive, academic, and emotional/behavioral functioning (Gresham & MacMillan, 1997). These students might be classified into one of the high-incidence disability groups specified in the Individuals With Disabilities Education Act (IDEA) and include specific learning disabilities, mental retardation, emotional disturbance, and attention deficit/hyperactivity disorder (eligible for services under Section 504 of the Rehabilitation Act of 1973).

Social competence historically has been a fundamental criterion used to define and classify students with high-incidence disabilities. This is clear in the modern classification criteria for mental retardation, which have consistently emphasized the importance of cognitive and *social competence* deficits (Gresham, MacMillan, & Siperstein, 1995). Likewise, social competence deficits have been used in the identification and classification of students as emotionally disturbed (Forness & Knitzer, 1992; Skiba & Grizzle, 1991). In fact, two of the five criteria specified in IDEA are pivotal in identifying students with emotional disturbance: (a) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers and (b) inappropriate types of behavior or feelings under normal circumstances.

Social competence deficits are critical in the development of several childhood disorders characterized by an externalizing behavior pattern such as oppositional defiant disorder, conduct disorder, and attention deficit/hyperactivity disorder (ADHD) (Achenbach, 1985; Hinshaw, 1987; Kazdin, 1987). For example, students demonstrating an antisocial behavior pattern characterized by aggression, hostility, and violation of social norms are highly resistant to intervention, particularly if intervention does not take place relatively early in the child's educational career (Walker, Colvin, & Ramsey, 1995). Kazdin (1987) suggested that, after about age 8 (Grade 3), an antisocial behavior pattern should be viewed as a chronic condition (e.g., diabetes) that cannot be "cured," but rather controlled and managed with appropriate interventions and supports.

A number of professionals have noted the importance of social competence deficits with students having specific learning disabilities (Gresham, 1992; Gresham & Elliott, 1989, 1990; LaGreca & Stone, 1990). The Interagency Committee on Learning Disabilities (1987) stated that a consensus had developed that social skills deficits represent a specific learning disability. This proposal, however, has not been adopted or widely endorsed (Gresham, 1992). Nonetheless, the literature clearly shows that many students with specific learning disabilities exhibit substantial deficits in social competence, which co-occurs with their academic difficulties (Gresham, 1992).

Finally, students with ADHD exhibit significant social competence deficits and difficulties in interpersonal relationships (Landau & Moore, 1991). Pelham and Bender (1982) estimated that over half of children with ADHD experience substantial difficulties in interpersonal relationships with other children, their parents, and their teachers. Landau and Moore (1991) suggested that these children evoke an extremely negative response from their peer group that, in turn, leads to high levels of peer rejection. These students are perceived by peers and teachers as annoying, boisterous, intractable, and irritating, much of which can be attributed to their behavioral characteristics of impulsivity, inattention, and overactivity.

It is clear that school psychologists require knowledge and skills for conceptualizing, assessing, intervening, and evaluating intervention outcomes for children having social competence deficits. The purpose of this chapter is to present readers with practical information and strategies for the conceptualization of social competence assessment and reviews intervention strategies having the most empirical support. A conceptualization and discussion of generalization and maintenance of social skills concludes the chapter.

CONCEPTUALIZATION OF SOCIAL COMPETENCE

A recent comprehensive review of theories and definitions of social skills by Merrell and Gimpel (1998) indicated that there were 15 definitions that have been used in the literature. Although many definitions and conceptualizations of social competence have been discussed, the *social validity* definition represents a particularly useful way of conceptualizing social competence (Gresham, 1983; Wolf, 1978). A social validity conceptualization defines social skills as socially significant behaviors exhibited in specific situations that predict important social outcomes for children and youth. *Socially significant* behaviors are those behaviors that treatment consumers (e.g., parents, teachers, peers) consider desirable and which predict an individual's standing on socially important outcomes. *Socially important* outcomes are outcomes that treatment consumers consider important, adaptive, and functional (Wolf, 1978). In short, socially important outcomes make a difference in terms of an individual's functioning or adaptation to environmental demands and age-appropriate societal expectations. Socially important outcomes might include peer acceptance and friendships (Newcomb, Bukowski, & Pattee, 1993), teacher and parental judgments of social competence (Gresham & Elliott, 1990; Merrell, 1993), and school adjustment (Walker, Irvin, Noell, & Singer, 1992).

The social validity definition also distinguishes between the concepts of *social competence* and *social skill* (cf., McFall, 1982). In this view, social skills are specific behaviors that an individual exhibits to perform competently on a social task (e.g., starting a conversation or entering an ongoing play group). Social competence is an evaluative term based on judgments that a person has performed competently on a social task. These judgments may be based on opinions of significant others (e.g., teachers, parents, peers), comparisons to explicit criteria (e.g., number of social tasks correctly performed), and /or comparisons to a normative sample. In short, this view of social competence considers social skills to be specific behaviors that result in *judgments* about those behaviors (McFall, 1982). In sum, social skills are behaviors that must be taught, learned, and performed, whereas social competence represents judgments or evaluations of those behaviors within and across situations over time.

BASIC CONSIDERATIONS

Assessment Issues

A comprehensive discussion of social skills assessment methods is beyond the scope of the current chapter. However, several factors should be recognized in linking social skills assessment information to intervention strategies. Social skills assessment takes place in five major stages of the assessment/intervention: (a) screening/selection, (b) classification of social skills deficits, (c) target behavior selection, (d) functional assessment, and (e) evaluation of intervention outcomes. Table 1 presents 12 major goals of social skills assessment. These 12 goals of social skills assessment can also be classified within the four stages of a problem-solving model: problem identification, problem analysis, plan implementation, and treatment evaluation (Bergan & Kratochwill, 1990).

Like all behavioral assessment methods, social skills assessment methods can be broadly classified as *indirect* or *direct* (Gresham, 1998a; Gresham & Lambros, 1998). Indirect behavioral assessment methods assess behavior that is removed in time and place from its actual occurrence. Examples of these methods include functional assessment interviews, ratings by others, peer assessment methods (e.g., peer nominations and peer rating scales), and analogue role-play measures. Direct measures assess behavior at the time and place of its actual occurrence and include naturalistic observations of social behavior (e.g., classroom and playground) and self-monitoring strategies.

SOCIAL VALIDITY OF ASSESSMENTS.

Social skills assessment methods have also been classified on the basis of a social validity criterion (Gresham, 1983). *Type I* measures represent a social valued treatment goal in the sense that social systems (e.g., schools, courts, mental health agencies) and significant others (teachers, parents) tend to refer children for evaluation and intervention based on these measures. Type I measures of peer acceptance/rejection, friendship status, teacher or parent judgments, and some types of archival data (e.g., school attendance, disciplinary referrals, school suspensions, arrests).

Table 1. Goals of social skills assessment

Problem Identification	• Identify social skills strengths
	• Identify social skills acquisition deficits
	• Identify social skills performance deficits
	• Identify social skills fluency deficits
	• Identify competing problem behaviors
Problem Analysis	• Conduct functional assessment
	• Determine the social validity of specific social skills for treatment consumers
	• Select target behaviors for intervention
Plan Implementation	• Develop intervention strategies based on assessment information
Treatment Evaluation	• Select appropriate outcome measures
	• Evaluate effects of intervention
	• Assessment generalization and maintenance of effects

Type I measures are inherently socially valid. However, a major disadvantage of these measures is that they are not particularly sensitive in detecting short-term treatment effects. Sechrest, McKnight, and McKnight (1996) argued for using the method of *just noticeable differences* (JNDs) to gauge treatment outcomes. In applying the JND approach to social skills interventions, the question is, How much of a difference in social behavior is required for it to be noticed by significant others in the student's environment? For example, large and extended increases in positive social interactions with peers in both classroom and playground settings may be required before these changes are reflected in sociometric ratings of peer acceptance, friendship ratings, and /or teacher judgments of social skills.

Type II measures have demonstrated empirical relationships with Type I measures, and, as such, serve as indicators of one's standing on Type I measures. Type II measures are not socially valid in and of themselves, but they are useful because they predict important social outcomes for students. Common Type II measures are observations of social behavior in natural environments such as classrooms and playgrounds (see Hintz, this volume). These measures have been used frequently in social skills intervention research, and they are used exclusively in applied behavior analytic studies employing single case experimental designs.

Type III measures represent the least socially valid measures in assessing students' social competence, because they show little correspondence to Type I or Type II measures (Bellack, Hersen, & Turner, 1978; Bellack, Hersen, & Lamparski, 1979; Urbain & Kendall, 1980). Several types of measures qualify as Type III measures including behavioral role-play tests, social problem-solving measures, and various measures of social cognition. Gresham (1983) argued that although Type III measures have some face validity, they do not predict important social outcomes for students.

There is little evidence that performance on Type III measures is related to the following: (a) social behavior in naturalistic settings (Type II measures), (b) teacher or parent judgments of social competence

(Type I measures), or (c) peer assessment measures such as indices of acceptance, rejection, or friendship status (Type I measures). Support for this interpretation can be found in the meta-analyses by Beelman, Pfingsten, and Losel (1994) as well as by Denham and Almeida (1987), which showed social problem-solving interventions have a relatively strong impact on social problem-solving skills measured by Type III measures but had little impact on behavior ratings or social interaction skills measured in naturalistic settings.

Taxonomy of Social Skills

A great deal of empirical research has focused on developing a taxonomy or dimensional approach to classifying maladaptive or problem behaviors (see McConaughy, this volume). Achenbach and colleagues have developed a reliable and valid classification system for externalizing and internalizing behavior patterns that are reflected in teacher, parent, and student rating scales (see Achenbach,1985).

A recent synthesis by Caldarella and Merrell (1997) provided such taxonomy in a review of 21 investigations by using 19 social skills rating scales and inventories. Studies in this analysis and synthesis of factor analytic research included 22,000 students ranging from 3–18 years of age with about equal gender representation across studies. Teacher rating scales were used in about three-quarters of the studies, with parent and self-report measures being used in approximately 19% of the studies.

Candarella and Merrell's synthesis included five broad social skills domains: (a) peer relations skills, (b) self-management skills, (c) academic skills, (d) compliance skills, and (e) self-management skills. The taxonomy presented by these authors provides useful directions for selecting target social skills domains for more in-depth and specific assessment and intervention strategies. A number of these social skills domains have been used in published social skills curricula and intervention programs (Elias & Clabby, 1992; Elliott & Gresham, 1992; Goldstein, 1988; Walker, McConnell, Holmes, Todis, Walker, & Golden, 1983). Candarella and Merrell point out that such a taxonomy is useful because it (a) provides a nomenclature to refer to typical social skill patterns, (b) identifies a profile of social skill dimensions on which students may have relative strengths and weaknesses, (c) can be used to design interventions to teach social skills, (d) can be used to measure the outcomes of social skills interventions, and (e) can facilitate theory development concerning the causes, prognosis, and responsiveness of students to social skills intervention procedures.

Classification of Social Skills Deficits

An important step in considering students' social behavioral difficulties is determining the specific type of social skills deficits they may have. Gresham (1981) first distinguished between social skills *acquisition* and *performance* deficits. This distinction is important because different intervention approaches in remediating social skills deficits are required and different settings for carrying out social skills training (e.g., pullout groups versus classroom-based interventions) are indicated. A third type of deficit might be termed a *fluency* deficit in which a student knows how and wants to perform a given social skill, but renders an awkward or unpolished performance of the social skill. A fluency deficit in this sense is not unlike beginning or inexperienced readers who can accurately decode words, but render slow, dysfluent reading performances.

Social skill acquisition deficits refer either to the absence of knowledge for executing a particular social skill even under optimal conditions or a failure to discriminate which social behaviors are appropriate in specific situations. Social performance deficits represent the presence of social skills in a student's behavioral repertoire, but the failure to perform these skills at acceptable levels in given situations. Acquisition deficits can be thought of as "can't do" deficits, whereas performance deficits are "won't do" deficits. Fluency deficits stem from a lack of exposure to sufficient or competent models of social behavior, insufficient rehearsal or practice of a skill, or low rates or inconsistent delivery of reinforcement of skilled performances.

Gresham and Elliott (1990) extended the social skills classification model to include the notion of *interfering* or *competing* problem behaviors. In this scheme, two dimensions of social behavior—social skills and competing problem behaviors—are combined to classify social skills deficits. Competing behaviors can include internalizing or over-controlled behaviors (e.g., anxiety, depression, social withdrawal) or externalizing or under-controlled behavior patterns (e.g., aggression, disruption, impulsivity).

This social skills deficit classification model is pivotal in linking assessment results to interventions for social skills deficits. It is illogical to teach social skills to students already having these skills in their repertoires (i.e., with performance or fluency deficits). Similarly, intervention procedures to increase performance of a social skill (e.g., prompting, shaping, and reinforcement) are not particularly efficient in remediating acquisition deficits. Finally, students having fluency deficits do not require the skill to be re-taught, nor do they need to increase the frequency of its awkward performance. Instead, these students require more practice (opportunities to respond), rehearsal (repetitions), and/or differential reinforcement (shaping) for fluent behavioral performances. Unfortunately, almost all social skills training studies (to be described later) have not distinguished between these types of social skills deficits in delivering interventions to remediate social behavioral difficulties (Gresham, 1998a, 1998b).

BEST PRACTICES IN SOCIAL SKILLS TRAINING

Social skills training (SST) should emphasize the acquisition, performance, generalization and maintenance of prosocial behaviors and the reduction or elimination of competing problem behaviors. A large number of intervention procedures have been identified for teaching social skills to children and youth.

Types of Social Skills Training

The school is an ideal setting for teaching social skills because of its accessibility to children, their peers, teachers, and parents. Fundamentally, social skills intervention takes place in schools and home settings both informally and formally by using either *universal* or *selected* intervention procedures. *Informal* social skills intervention is based on the idea of incidental learning, which takes advantage of naturally occurring behavioral incidents or events to teach appropriate social behavior. Most social skills instruction in home, school, and community settings can be characterized as informal or incidental. Literally thousands of behavioral incidents occur in home, school, and community settings and create rich opportunities for making each of these behavioral incidents a potentially successful learning experience.

Formal social skills instruction can take place in a classroom setting in which the entire class is exposed to a social skills curriculum or in a small group setting removed from the classroom. Walker et al. (1995) refer to these teaching formats as *universal* or *selected* interventions, respectively. Universal interventions are not unlike vaccinations, school-wide discipline plans, or school rules that are designed to affect all children under the same conditions. Universal interventions are designed to prevent more serious problems from developing later in a child's life and, as such, represent primary prevention strategies. Selected interventions are typically conducted with children who have been identified as being at risk for behavior problems and are based on an individual assessment of a child's social skills deficits and competing problem behaviors. These interventions are undertaken to prevent existing behavior problems from developing into more serious behavior problems (i.e., secondary and tertiary interventions).

Objectives of SST

SST has four primary objectives: (a) promoting skill acquisition, (b) enhancing skill performance, (c) reducing or eliminating competing problem behaviors, and (d) facilitating generalization and maintenance of social skills. It should be noted that some children would likely have some combination of acquisition and performance deficits, some of which may be accompanied by competing problem behaviors and some others that are not. Thus, any given child may require some combination of acquisition, performance, and behavior reduction strategies. All children will require procedures to facilitate generalization and maintenance of social skills.

Table 2 lists specific social skills training and behavior reduction strategies for each of the four goals of SST. School psychologists must match appropriate intervention strategies with the particular deficits or competing problem behaviors the child exhibits. A common misconception is that one seeks to facilitate generalization and maintenance *after* implementing procedures for acquisition and performance of social skills. The evidence is clear that the best practice is to incorporate generalization from the beginning of any SST program (Gresham, 1998a).

Table 2. Social skills training objectives and strategies

- I. PROMOTING SKILL ACQUISITION
  - A. Modeling
  - B. Coaching
  - C. Behavioral rehearsal
- II. ENHANCING SKILL PERFORMANCE
  - A. Manipulation of antecedents
    - 1. Peer initiation strategies
    - 2. Proactive classroom management strategies
    - 3. Peer tutoring
    - 4. Incidental teaching
  - B. Manipulation of consequences
    - 1. Contingency contracting
    - 2. Group-oriented contingency systems
    - 3. School/home notes
    - 4. Verbal praise
    - 5. Activity reinforcers
    - 6. Token/point systems
- III. REMOVING COMPETING PROBLEM BEHAVIORS
  - A. Differential reinforcement
    - 1. Differential reinforcement of other behavior (DRO)
    - 2. Differential reinforcement of low rates of behavior (DRL)
    - 3. Differential reinforcement of incompatible behaviors (DRI)
  - B Over-correction
    - 1. Restitution
    - 2. Positive practice
  - C. Time-Out
    - 1. Non-exclusionary (contingent observation)
    - 2. Exclusionary
  - D. Systematic desensitization (for anxiety-based competing behaviors)
  - E. Flooding/Exposure (for anxiety-based competing behaviors)
- IV. FACILITATING GENERALIZATION
  - A. Topographical generalization
    - 1. Training diversely
    - 2. Exploiting functional contingencies
    - 3. Incorporating functional mediators
  - B. Functional generalization
    - 1. Identify strong competing stimuli in specific situations
    - 2. Identify strong competing problem behaviors in specific situations
    - 3. Identify functionally equivalent socially skilled behaviors
    - 4. Increase reliability and efficiency of social skilled behaviors (build fluency)
    - 5. Decrease reliability and efficiency of competing problem behaviors

Promoting Skill Acquisition

Procedures designed to promote skill acquisition are applicable when children do not have a particular social skill in their repertoire, when they do not know a particular step in the performance of a behavioral sequence, or when their execution of the skill is awkward or ineffective (i.e., a fluency deficit). It should be noted that a relatively small percentage of children would need social skills intervention based on acquisition deficits: Far more children have performance deficits in the area of prosocial behavior (Gresham, 1998a).

Three procedures represent pathways to remediation of deficits in social skills acquisition: modeling, coaching, and behavioral rehearsal. Social problem solving is another pathway, but it is not discussed here owing to space limitations and the fact that it incorporates the three procedures discussed in this section. More specific information on social problem solving interventions can be found in Elias and Clabby (1992).

Modeling is the process of learning a behavior by observing another person perform that behavior. Modeling instruction presents the entire sequence of behaviors involved in a particular social skill and teaches how to integrate specific behaviors into a composite behavior pattern. Modeling is one of the most effective and efficient ways of teaching social behavior (Elliott & Gresham,1992; Schneider, 1992).

Coaching is the use of verbal instruction to teach social skills. Unlike modeling, which emphasizes visual displays of social skills, coaching utilizes a child's receptive language skills. Coaching is accomplished in three fundamental steps: (a) presenting social concepts or rules, (b) providing opportunities or practice or rehearsal, and (c) providing specific informational feedback on the quality of behavioral performances.

Behavioral rehearsal refers to practicing a newly learned behavior in a structured, protective situation of role-playing. In this way, children can enhance their proficiency in using social skills without experiencing adverse consequences. Three forms of behavioral rehearsal follow: (a) covert rehearsal, (b) verbal rehearsal, and (c) overt rehearsal. These three procedures can be used in a number of ways and combinations. For example, school psychologists could ask children to imagine being teased by another child and then to imagine how they would respond (covert rehearsal). Next, one might consider combining covert rehearsal with verbal rehearsal by asking children to recite specific behaviors they would exhibit in imagined situations. Finally, one might combine covert and verbal rehearsal with overt rehearsal by asking children to role-play the imagined situation.

Enhancing Skill Performance

Most social skills interventions will involve procedures that increase the frequency of particular prosocial behaviors in specific situations because most social skills difficulties are performance rather than acquisition deficits. This suggests that most social skills interventions for most children should take place in naturalistic environments (e.g., classrooms, playgrounds) rather than small pullout groups. As such, using a consultative framework for intervention can facilitate most SST. Failure to perform certain social skills in specific situations results from two fundamental factors: (a) inappropriately arranged antecedents and/or (b) inappropriately arranged consequences. A number of specific procedures can be classified under the broad rubrics of antecedent and consequent strategies.

Interventions based on antecedent control assume that the environment does not set the occasion for the performance of prosocial behavior. That is, cues, prompts, or other stimuli are either not present or are not salient for the child to discriminate these stimuli in relation to the performance of prosocial behavior.

Two general strategies fall under the category of antecedent strategies: peer-mediated interventions and cueing/prompting. Peer-mediated interventions can include three techniques: (a) peer initiations, (b) peer tutoring, and (c) peer modeling (Kohler & Strain, 1990). With peer initiation strategies, a child's peers are used to initiate and maintain social interactions with socially withdrawn or isolated children. This procedure is effective for children who have performance deficits and who evidence relatively low rates of social interaction, but do not have externalizing behavior problems. Peer tutoring has been used primarily to enhance academic skills (Skinner, 1998), and peer modeling is used primarily in remediating social skill acquisition deficits.

A cueing and prompting procedure uses verbal and nonverbal cues or prompts to facilitate prosocial behaviors. Simple prompts or cues for some children may be all that is needed to signal them to engage in socially appropriate behavior (e.g., "Say thank you" or "Ask Dan to join your group"). Cueing and prompting represent one of the easiest and most efficient social skills intervention strategies (Elliott & Gresham, 1992; Walker et al., 1995).

Interventions based on consequent control can be classified into three broad categories: (a) reinforcement-based strategies, (b) behavioral contracts, and (c) school-home notes. Reinforcement-based strategies assume the child knows how to perform a social skill, but is not doing so because of little or nonexistent reinforcement for the behavior. Reinforcement strategies include attention, social praise, tokens/points, and activity reinforcers as well as group-oriented contingency systems. More extensive discussions of behavioral contracts, school-home notes, and group-oriented contingency systems can be found in more comprehensive treatments of these subjects (Kelley, 1990; Kohler & Strain, 1990; Stuart, 1971).

Removing or Eliminating Competing Problem Behaviors

The focus in SST is clearly on developing and refining prosocial behaviors. However, as was mentioned earlier, the failure of some children to either acquire or perform certain social skills may be due to the presence of competing problem behaviors. In the case of acquisition deficits, the competing problem behaviors may block social skill acquisition. For instance, self-stimulatory behaviors of an autistic child may prevent the development of eye contact and conversation skills. In performance deficits, aggressive behavior may be performed instead of a prosocial behavior because it may be more efficient and reliable in producing reinforcement. Because of space considerations and the author's interest in delivering positive behavioral interventions, only differential reinforcement techniques are discussed in the following paragraphs.

Differential reinforcement derives from the principles of stimulus control in which a behavior is reinforced in the presence of one stimulus and is not reinforced in the presence of other stimuli. After a number of trials of differential reinforcement, a behavior will come under the control of the stimulus associated with reinforcement and thus is said to be under *stimulus control*. Principles of stimulus control can be used to decrease rates of undesirable behavior and increase rates of prosocial behavior. Three types of differential reinforcement are used most frequently: differential reinforcement of other behavior (DRO), differential reinforcement of low rates of behavior (DRL), and differential reinforcement of incompatible behavior (DRI).

DRO refers to the delivery of a reinforcer after any behavior except the target behavior. The effects of DRO are to decrease the frequency of a target behavior and increase the frequencies of all other behaviors. Technically speaking, *any* behavior except the target behavior is reinforced (appropriate or inappropriate). Practically, only *appropriate* behaviors are in a DRO.

Two types of DRO are used: interval DRO and momentary DRO. Interval DRO involves the reinforcement of a behavior if the targeted behavior does not occur in a specified time interval. Thus, an interval DRO 2-minute, the first behavior occurring after a 2-minute interval in which the target behavior (e.g., cursing) *did not occur* is reinforced. If cursing occurs at any time during the 2-minute interval, the timer is reset to the beginning of the interval. In momentary DRO, behavior is *sampled* at the end of a specified time interval. If the target behavior is *not* occurring at the end of the interval, the first behavior occurring after the interval is reinforced. In a momentary 2-minute DRO, a behavior is reinforced if the target behavior is not occurring at the end of the 2-minute sampling time.

Either DRO schedule can be used to reduce the frequency of problem behaviors in a variety of settings. The primary problem with DRO schedules is keeping up with time intervals and resetting the timer. Momentary DRO schedules are more user-friendly than interval DROs and should be more reasonable for practical purposes.

DRL involves the reinforcement of reductions in the frequency of target behaviors in a specified time interval. Two variations of DRL schedules are described: classic DRL and full session DRL. In classic DRL, the time elapsing between behaviors or interresponse times (IRTs) are gradually lengthened. For example, if a child interrupts frequently, interruptions could be reduced in frequency by reinforcing the child waiting 5 minutes between instances of interruptions. If the child interrupted before 5 minutes elapsed (e.g., 2 minutes or 4 minutes), then the timer would be reset and the 5-minute waiting requirement would remain in effect. This would be called a classic DRL-5-minute schedule of reinforcement.

In full session DRL, reinforcement is provided when the overall frequency of a target behavior is reduced by a specified time session. The difference between a full session DRL and a classic DRL is that full session DRLs do not require longer and longer intervals between occurrences of target behavior. Instead, the requirement is that overall frequency of a target behavior in a specified time interval be reduced. For example, a teacher might set a criterion of five or fewer occurrences of disruptive behavior during a 25-minute reading lesson. If this criterion were met, then the child would receive reinforcement. Full session DRLs are more user-friendly than classic DRLs and are easily adapted within the context of group contingency systems.

In DRI, behaviors incompatible with the target behavior are reinforced. Whereas DRO and DRL focus on reducing the frequencies of problem behaviors, DRI emphasizes *increasing* the frequencies of prosocial behaviors. DRI reduces the frequency of competing problem behaviors because prosocial behaviors that are incompatible with problem behaviors are increased in frequency. Several examples should make this clear: sharing behavior is incompatible with stingy behavior, complimenting others is incompatible with teasing others, asking others to borrow a toy is incompatible with grabbing a toy, and compromising with others is incompatible with fighting.

DRIs are not effective because of the incompatibility of behaviors but rather because of the relative rate of reinforcement for each behavior (McDowell, 1982). For example, a child might "choose" to tease others or the child might "choose" to compliment others. Complimenting is incompatible with teasing; however, the child can "choose" to stop complimenting and start teasing at any time. DRI makes particular use of the Matching Law (Herrnstein, 1970), which states that response rate matches reinforcement rate. Based on principles of matching, a child's behavior should follow the Matching Law, and incompatible problem behaviors should decrease and prosocial behaviors should increase using DRI.

Facilitating Generalization and Maintenance

At its most basic level, only two processes are essential to all behavioral interventions: *discrimination* and *generalization* (Stokes, 1992). Discrimination and generalization represent polar opposites on the continuum of behavior change. A major problem confronting social skills trainers is that it is much easier to get some behaviors to occur in one place for a limited period. In other words, SST is somewhat effective in teaching *discriminations*. On the other hand, getting social behavior to occur in more than one place for an extended period has proven to be more difficult to achieve. That is, *generalization* of SST across participants, settings, and behaviors and *maintenance* of these effects over time has been less successful.

Generalization of behavior change is directly related to the phenomenon of resistance to intervention. If social skill deficits at low frequencies, then competing problem behavioral excesses occur at high frequencies, and both of these deficits and excesses are chronic (i.e., they have lasted a relatively long period) and will tend to show less generalization across different non-training conditions and less maintenance over time when SST are withdrawn. (Gresham, 1991). In effect, these children relatively quickly discriminate training from non-training conditions, particularly when training conditions are vastly different from non-training conditions. For example, students exposed to highly structured point system complete with a response cost component for inappropriate behavioral excesses and a reinforcement component for socially appropriate behavior will readily discriminate when the program is in effect and when it is withdrawn. Discrimination being the polar opposite of generalization, behavior will deteriorate rapidly to baseline levels when one returns to non-training conditions.

Students with severe behavior challenges often show excellent initial behavior change, particularly with their competing problem behavioral excesses, but fail to show generalization or maintenance of these behavior changes. One reason for this may be that exclusive attention often is focused on decreasing the momentum of undesirable behavior to the exclusion of facilitating the momentum of desirable behaviors such as social skills. Perhaps the main reason for the lack of generalization and maintenance is that these essential components of behavior change are not actively programmed to occur as a part of SST programs.

Generalization is typically regarded from two perspectives. One emphasizes behavioral *form* or *topography* and the other emphasizes behavioral *function* (Edelstein, 1989; Stokes & Osnes, 1989). The topographical description of generalization refers to the occurrence of relevant behaviors under different, non-training conditions (Stokes & Osnes, 1989). The so-called relevant behaviors (e.g., social skills) can occur across settings or situations (setting generalization), behaviors (response generalization), and/or over time (maintenance). Table 2 presents three categories of topographical generalization strategies. A more detailed treatment of these strategies can be found in Stokes and Osnes (1989). The topographical approach to generalization suggests that relevant behaviors can be made to occur in other settings, that they may lead to increases in collateral behaviors, or that they may be maintained over time. This approach, however, does not indicate *why* generalization and maintenance occurred. Topographical generalization merely describes an observed outcome or correlate of an intervention program, but does not provide a *functional* account of this outcome.

The functional approach to generalization consists of two types: (a) *stimulus generalization*, which is the occurrence of the same behavior under variations of the original stimulus (the greater the difference between the training stimulus and subsequent stimuli, the less generalization) and (b) *response generalization*, which is the control of multiple behaviors by the same stimulus (a functional response class).

One way of understanding generalization errors, functionally, is within the context of competing behaviors. Horner and Billingsley (1988) offered the following scenario: A child has acquired a new, adaptive social skill and demonstrates excellent generalization across new situations. A new situation is presented that contains a strong competing stimulus. This competing stimulus is likely to elicit old, undesirable behavior. This practical effect is that the new adaptive social skill does not generalize to situations containing the strong competing stimulus.

The above scenario would create no problems if the child did not have to encounter environments with the strong competing stimulus. However, it is not always possible to arrange this, such as when the strong competing stimulus is a classmate or teacher. The notion of strong competing stimuli may explain why so many problem drinkers "fall off the wagon" (bars, alcohol, and drinking buddies represent strong competing stimuli for excessive undesirable drinking behavior). One reason, among many, that social skills fail to generalize is that the newly taught behavior is masked or overpowered by older and stronger competing behaviors. This is an important concept for understanding why some behaviors generalize to some new situations, but not others, and why a behavior that has been maintained well for a long time may suddenly deteriorate.

An extremely important goal of SST is to determine the *reliability* and *efficiency* of competing problem behaviors relative to socially skilled alternative behaviors. Competing problem behaviors are often performed instead of socially skilled behaviors because the competing behaviors are more efficient and more reliable than the socially skilled behavior (Horner & Billingsley, 1988). Efficient behaviors are those that (a) are easier to perform in terms of response effort and (b) produce reinforcement more rapidly. Reliable behaviors are those that produce the desired outcomes more frequently than do the socially skilled alternative behaviors. For example, pushing into the lunch line may be more efficient and reliable than politely asking to cut into the lunch line.

Horner and Billingsley (1988) have termed the above the *functional equivalence of behavior*. That is, two or more behaviors can be equal in their ability to produce reinforcement. Thus, grabbing a toy is more efficient than asking for toys or pushing a peer out of the way is more efficient than asking the peer to move. All things being equal, preexisting behaviors are likely to successfully compete with socially skilled behaviors if the preexisting behaviors lead to more powerful or immediate reinforcers or more efficiently produce the same reinforcement as the socially skilled behavior (i.e., they are more cost beneficial).

To program for functional generalization, school psychologists should (a) decrease the efficiency and reliability of competing, inappropriate behaviors and (b) increase the efficiency and reliability of socially skilled alternative behaviors. The latter can be achieved by spending more time and effort in building the fluency of trained social skills by using combinations of modeling, coaching, and, most important, behavioral rehearsal with specific performance feedback.

SUMMARY

Social skills are behaviors that lead to judgments of social competence by significant others such as teachers, parents, and peers, and they are the tools by which children and youth build, maintain, and improve the quality of their interpersonal relationships. From a social validity perspective, social skills can be defined as socially significant behaviors exhibited in specific situations that predict socially important outcomes for children and youth. Social skills deficits were classified as being acquisition, performance, or fluency deficits, which may or may not be accompanied by competing problem behaviors. This classification was described as essential in determining the most appropriate social skills intervention strategies.

Social skills training was viewed as having four fundamental objectives: (a) promoting skill acquisition, (b) enhancing skill performance, (c) removing or reducing competing problem behaviors, and (d) facilitating generalization and maintenance of prosocial behaviors. Specific strategies for accomplishing each of these four objectives were described. Particular emphasis was placed on the notion of functional generalization as it relates to efficiency and reliability of behavior and the resistance of social behavior to intervention.

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66 Best Practices in Preschool Social Skills Training

Stephen N. Elliott and Brian C. McKevitt
University of Wisconsin-Madison
James Clyde DiPerna
Lehigh University

OVERVIEW

Behaviors such as sharing, helping, initiating relationships, requesting help from others, and saying "please" and "thank you" are examples of socially appropriate behaviors that enable children young and old to successfully function in social settings. Developing these types of social skills is believed to be one of the most important accomplishments of childhood and can lead to successful social relationships and academic functioning. In fact, researchers have established that parents and teachers rank social and language skills as the most important skills needed to transition successfully from preschool to kindergarten (Hains, Fowler, Schwartz, Kottwitz, & Rosenkoetter, 1989; Johnson, Gallagher, Cook, & Wong, 1995).

The process of developing social skills in early childhood, although not fully understood, begins soon after birth and is influenced by person variables (e.g., physical abilities, language, and communication skills) and environmental variables (e.g., family members' and peers' involvement and interactions) (Eisenberg & Mussen, 1989). Unfortunately, some children do not acquire adequate social skills and often experience negative child-adult or child-child relationships as a result. In addition, several researchers have documented that social skills play an important role as academic enablers, or skills that allow students to benefit from instruction (DiPerna & Elliott, 2000; Wentzel, 1993). Thus, the identification and treatment of preschool children who are experiencing delays or deficiencies in social-emotional development warrant the attention of teachers, parents, and psychologists (Elias et al., 1997). This call for attention is congruent with research that documents significant social skills deficits in young students with mild or moderate disabilities (e.g., Cassidy & Asher, 1992; Guralnick, 1986; Strain, Odom, & McConnell, 1984). Briefly, this literature indicates that students with disabilities frequently display fewer positive social and cooperative behaviors, show less initiative in peer interactions, and exhibit lower rates of peer reinforcement than their students without disabilities. If untreated, these social skills deficits have been shown to be relatively stable over time, related to poor academic performance, and may be predictive of social adjustment problems in adolescence and adulthood (Parker & Asher, 1987). Given these potential negative outcomes, it is imperative that psychologists and educators of young children identify social skills difficulties and implement empirically supported interventions as soon as concerns arise.

The purposes of this chapter are to (a) provide an overview of typical social development during the preschool years as well as appropriate parent expectations for preschool children's behavior, (b) briefly review the process of assessing social functioning and identifying skills in need of treatment, and (c) focus on effective methods for promoting social skills in preschoolers. Additional information on each of these topics is provided in the Annotated Bibliography at the end of the chapter.

BASIC CONSIDERATIONS

Identification and Development of Socially Important Behaviors

Social skills may be defined as socially acceptable learned behaviors that enable a person to interact with others in ways that elicit positive responses and to avoid negative responses (Gresham & Elliott, 1984, 1990). When social skills are enacted successfully, the results generally are positive perceptions of social competence. The acronym of CARES has been used to identify, and assist with the memory of, five major behavioral clusters of social skills. These skill clusters are Cooperation, Assertion, Responsibility, Empathy, and Self-Control. Briefly, these clusters of social behaviors can be characterized for preschoolers as follows:

1. Cooperation: Behaviors such as helping others, sharing materials with a peer, and complying with rules.

2. Assertion: Initiating behaviors such as asking others for information and behaviors that are responses to others' actions such as responding to peer pressure.

3. Responsibility: Behaviors that demonstrate ability to communicate with adults and concern about one's property.

4. Empathy: Behaviors that reflect concern for peers' or significant adults' feelings.

5. Self-control: Behaviors that often emerge in conflict situations such as responding appropriately to teasing or to corrective feedback from an adult.

Guevremont (1990) developed an alternative but equally appealing situational approach to characterizing clusters of target skills. Specifically, these skill clusters are referred to as social entry skills, conversational skills, conflict-resolution skills and problem-solving skills, and anger-control skills. Regardless of the terminology or approach one uses to characterize target social skills, the behaviors of interest to most individuals conducting social skills interventions are those observable nonverbal and verbal interpersonal skills that maximize social engagement and social reinforcement.

What is the normal course of social skill development for young children? There is general agreement that older preschool children engage in socially cooperative activities with greater frequency than younger children. Having established that social interaction does indeed increase ontogenetically, with interactive behaviors occurring very early in a child's life, investigators have directed their attention to the behavioral components of successful social interactions. Findings from these investigations are relevant to efforts to remediate social skill deficits in children who have difficulty interacting effectively (cf. Eisenberg & Harris, 1984; Eisenberg & Mussen, 1989).

One area of interest concerns social initiation, that is, the manner in which a child attempts to initiate social interaction. Not surprisingly, Leiter (1977) found requests to play that were accompanied by whining, crying, begging, or coercion were more likely to be denied, whereas friendly, smiling initiations with suggestions for an activity were more likely to be accepted. This is not to say that children who are ingratiating always have successful social initiations. Rather, a judicious balance between assertiveness and accommodation to others' interests constitutes a more successful strategy (Lamb & Baumrind, 1978). Similarly, Hazen, Black, and Fleming-Johnson (1984) found popular children who were successful at entering others' play situations were able to alter their entry communications to fit the demands of ongoing play situations, reflecting not only the knowledge of a wide array of social initiation strategies but also the adaptability to use the strategies appropriately. Further, in contrast with less socially successful children, popular children clearly indicated to whom they were addressing their entry statements, and they communicated to *all* children in the play situation they were trying to enter. Thus, it appears that successful social initiation is characterized by specific nonverbal and verbal communication behaviors that clearly transmit the entering child's desire as well as awareness of contextual accommodations.

A second area of relevant developmental research is concerned with those skills that enhance the maintenance of social interaction. Asher (1978) described the characteristics of maintenance skills frequently used by socially successful children. These include complex perspective-taking abilities, such as adjusting the effectiveness of one's communications to other children's needs. In addition, more straightforward reinforcement strategies may be employed, such as offering other children praise and approval, as well as going along with another child's plan or wishes. Related to these maintenance skills is the manner in which interpersonal conflict is managed by children who exhibit successful interaction styles. In a study of preschool children's friendships, Hartup, Laursen, Stewart, and Eastenson (1988) found that conflicts among friends did not differ from conflicts among nonfriends in situational inducement, frequency, or duration. What did make conflicts distinct between friends and nonfriends was an effort to maintain the interaction with friends in spite of the disagreement. Maintenance of the friendship was accomplished by the children disengaging from each other temporarily, thereby reducing the intensity of the conflict and increasing the likelihood of parity in outcome. This study exemplifies efforts to understand social skills within the context of perspective-taking. That is, behaviors that comprise successful peer interactions may be conceptualized as reflective of a maturing social-cognitive system in which children are developing the abilities to consider and coordinate their own and others' points of view (LeMare & Rubin, 1987).

Our brief review illustrates some key social skills, but does not address the behaviors that are considered to be important to parents and teachers of young children. It is important to consider this issue, because an intervention that addresses goals related to socially valid target behaviors has a greater chance of being used and maintained. Elliott, Barnard, and Gresham (1989) asked the parents and teachers of a heterogeneous group of preschool children to rate the frequency and importance of over 50 discrete social behaviors from the *Social Skills Rating System* (SSRS). The collective ratings of parents indicated the five most important social skills at home for their preschool children were (a) requests permission before leaving the house, (b) reports accidents or minor emergencies to an adult, (c) shows concern for friends' and siblings' feelings, (d) pays attention to parent verbal instructions, and (e) communicates problems to a parent. Similarly, Rubin, Mills, and Rose-Krasner (1989) interviewed mothers of four-year-olds and learned that they expected their children to be able to make friends before their second birthday, share by the time they were two and a half, and successfully lead or influence others before their third birthday. Thus, parents of preschoolers seem to place high value on basic communication skills and behaviors that indicate respect for others.

The teachers of the children in the Elliott et al. (1989) study indicated that the social skills of greatest importance for functioning in their classrooms were (a) attends to teacher's instructions, (b) complies with teacher's directions, (c) appropriately asks questions of the teacher when unsure of what to do in school work, (d) finishes class assignments within time limits, and (e) cooperates with peers without prompting from the teacher. These teachers valued social behaviors that are indicative of compliance, cooperation, and orderliness. Researchers (Hains et al., 1989; Johnson et al., 1995) using a variety of other survey tools have documented preschool and kindergarten teachers value a very similar set of social skills to those identified by Elliott and associates.

Assessment of Social Skills and Identification of Children in Need of Social Skills Training

A number of methods, including rating scales, checklists, and sociometric nomination techniques, have been designed to identify children at risk for behavior problems. Reviews of social skills assessment methods have been published by Gresham and Elliott (1989), Demaray et al. (1995), and Sheridan and Walker (1999). In general, social skills assessments have one of two purposes: identification/classification or intervention/program planning. From a behavioral perspective, the critical characteristic that differentiates assessment methods is the extent to which a method allows for a functional assessment of behavior (i.e., the extent to which an assessment procedure provides data on the antecedent, sequential, and consequent conditions surrounding a specific behavior).

Behavior rating scales have become one of the most common assessment methods given their ease of administration and broad coverage. There are now two published social skills rating scales with preschool norms: the SSRS (Gresham & Elliott, 1990) and the *Preschool and Kindergarten Behavior Scales* (PKBS) (Merrell, 1994). The preschool version of the SSRS comes in parent and teacher forms. For each form, raters evaluate children's prosocial and problem behaviors on a 3-point scale, rating behaviors as never, sometimes, or very often occurring. Despite criticisms that the parent and teacher preschool SSRS forms lack strong correlations (Manz, Fantuzzo, & McDermott, 1999) and have factor structures that differ for low-income populations from those reported in the manual (Fantuzzo, Manz, & McDermott, 1998; Manz et al., 1999), the SSRS has been shown to be a sound, useful, and user-friendly tool for social skills assessment and intervention planning (Demaray et al., 1995). The PKBS also measures social skills and problem behaviors with 76 items rated by parents, teachers, or daycare providers. Like the SSRS, the PKBS has good evidence for reliability and validity, and was developed through a comprehensive review of social skills and psychopathology literature (Holland & Merrell, 1998).

PROCESS OF ASSESSMENT

As with the psychological assessment of any problem, the process of social skills assessment can be characterized by a series of hypothesis-testing sequences. Hypotheses are generated in an attempt to answer questions regarding identification, intervention, and evaluation of treatment effects. A standard battery of tests or methods for assessing social skills does not exist. Rather, practitioner-generated hypotheses dictate the direction of assessment, the questions to be answered, and the methods to be used. Assessment should proceed from global to specific to allow appropriate planning of interventions. In contrast, evaluation of intervention success typically proceeds in the opposite direction, moving from behavior-specific outcomes to more global analyses of important social outcomes.

Ideally, practitioners should use assessment methods that possess the attributes of reliability (i.e., consistency of measurement), validity (i.e., capability of answering a given assessment question), and practicality (i.e., benefits outweigh costs of collecting information). Unfortunately, few social skill assessment methods meet all of these criteria. Easily administered instruments that are useful for screening purposes generally are of little help in designing interventions. Other methods requiring considerably more effort from assessors and clients (e.g., naturalistic observations and self-monitoring) often have equivocal or unknown psychometric properties (Dodge, Murphy, & Buchsbaum, 1984; Gresham & Elliott, 1990). Moreover, there is a tendency for assessment data obtained from different sources to correlate moderately at best, and more often, to correlate quite low (Ruffalo & Elliott, 1997). As a safeguard, multiple sources of information are considered a best practice when assessing social skills.

To increase the likelihood of accurate identification/classification decisions, we recommend the use of direct observations of the target child and nontarget peers in multiple settings; behavioral interviews with the referral source and possibly the target child; rating scale data, preferably norm-referenced, from both a social skills scale and a problem behavior scale completed by more than one source; and sociometric data from the target child's classmates. Regarding intervention decisions, data contributing to a functional analysis of important social behaviors is imperative. These types of data usually result from multiple direct observations across settings, behavioral role-plays with the target child, and teacher and parent/guardian ratings of socially valid molecular behaviors. Behavioral interviews with the treatment agent(s) also will be important to assess the treatment setting, the acceptability of the final treatment plan, and the integrity with which the plan is implemented.

Linking Social Skills Assessments to Interventions

Social skills interventions focus on positive behaviors and most often use nonaversive methods (e.g., modeling, coaching, and reinforcement) to improve children's behavior. Therefore, use of these methods may enhance treatment acceptability and integrity and can rather easily be built into the existing structure of a classroom or home environment (Barnett, Bell, & Carey, 1999). Finally, social skills interventions can be used with individuals or groups of students, and because they primarily concern increasing prosocial behaviors, all students can participate and benefit from the interventions.

The selection of social skills interventions rests heavily on the classification of social skills difficulties as resulting from either deficits in response acquisition or response performance (e.g., Bandura, 1977). Gresham and Elliott's (1990) SSRS extended this two-way classification scheme to include areas of social skills problems, social skills strengths, and potential concurrent interfering problem behaviors. As shown in Table 1, this scheme distinguishes whether a child possesses the ability to perform a target skill, and whether interfering behaviors (e.g., aggression, anxiety) are present. Additionally, Table 1 includes suggested treatments that have been found effective for various types of problems.

SOCIAL SKILLS ACQUISITION DEFICITS

This social skill problem characterizes children who have not acquired the necessary social skills to interact appropriately with others, or children who have not acquired a critical step in the performance of a given skill. Training in skill acquisition frequently uses direct treatment approaches, such as direct instruction, modeling, and coaching.

SOCIAL SKILLS ACQUISITION DEFICITS WITH INTERFERING PROBLEM BEHAVIORS

This social skills problem describes children with emotional (e.g., anxiety, sadness, impulsivity) and/or overt behavioral (e.g., verbal or physical aggression, tantrums, excessive movement) responses that interfere with skill acquisition. Thus, with social skills acquisition deficits accompanied by significant interfering behaviors, the intervention objectives are to teach and increase the frequency of prosocial behaviors while concurrently decreasing or eliminating interfering problem behaviors. Interventions designed to remediate emotional responses typically involve emotional-arousal reduction techniques such as desensitization or flooding, paired with self-control strategies such as self-talk, self-monitoring, and self-reinforcement (Kendall & Braswell, 1985; Meichenbaum, 1977). Interventions that can help reduce overt behaviors often are referred to as reductive procedures (Lentz, 1988). These procedures include the use of differential reinforcement, group contingencies, and mild aversive techniques (e.g., reprimands, time out from positive reinforcement, response cost, and overcorrection). If aversive techniques are used, it is a best practice

Table 1. A classification schema for conceptualizing and linking social behavior problems to interventions

	No interfering problem behaviors	*Interfering problem behaviors*
Social skills acquisition deficits	• Direct instruction • Modeling • Behavioral rehearsal • Coaching	• Modeling • Coaching • Differential reinforcement of a low rate of response (DRL) • Differential reinforcement of other behavior (DRO) • Reductive procedures to decrease interfering problem behaviors
Social skills performance deficits	• Operant methods to manipulate antecedent or consequent conditions to increase the rate of existing behaviors	• Operant methods to manipulate antecedent or consequent conditions to increase the rate of existing prosocial behaviors • Differential reinforcement of a low rate of response (DRL) • Differential reinforcement of other behavior (DRO) • Reductive procedures to decrease interfering problem behaviors
Social skills strengths	• Reinforcement procedures to maintain desired social behavior • Use student as a model for other students	• Reinforcement procedures to maintain desired social behavior • Reductive procedures to decrease interfering problem behaviors

to couple aversives with socially positive procedures.

SOCIAL SKILLS PERFORMANCE DEFICITS

Children with social skills performance deficits have appropriate social skills in their behavior repertoires, but do not perform the behavior at acceptable levels and/or at appropriate times or settings. Interventions for social skills performance deficits typically use manipulations of antecedent and consequent contingencies such as peer initiations, social reinforcement, and group contingencies.

SOCIAL SKILLS PERFORMANCE DEFICITS WITH INTERFERING PROBLEM BEHAVIORS

Children with social skills performance deficits accompanied by interfering problem behaviors have acquired given social skills, but performance of the skills is hindered by emotional or overt behavior responses *and* by problems in antecedent or consequent control. Self-control strategies to teach inhibition of inappropriate behavior, stimulus control training to teach discrimination skills, and contingent reinforcement to increase display of appropriate social behavior often are used to ameliorate this social skill problem. Occasionally, when the interfering behaviors persist, it may be necessary to use reductive methods in addition to positive techniques.

SOCIAL SKILLS STRENGTHS

Many children exhibit social skills strengths that often may be overlooked and may be undermined through lack of attention. Therefore, it is a best practice to take a proactive approach to maintaining those strengths through reinforcement of desired social behaviors. Children with strong social skills also can become part of a treatment strategy for children with social skills deficits by serving as models or as participants in peer pairing and peer initiation strategies.

Procedures for Promoting Social Skills

Teaching children social skills involves many of the same methods as teaching academic concepts. Effective teachers of both academic and social skills model correct behavior, elicit an imitative response, provide corrective feedback, and arrange for opportunities to practice the new skill (Cartledge & Milburn, 1995; Elliott & Gresham, 1993). A large number of intervention procedures have been identified as effective for social skills training with preschool children. These procedures can be classified into three approaches that highlight common treatment features and assumptions about how social behavior is learned. These approaches are (a) operant, (b) social learning, and (c) cognitive-behavioral. In practice, many researchers and practitioners have used procedures that represent combinations of these basic approaches. However, we will use the three groups of interventions to describe the basic procedures and to organize a review of their effectiveness.

OPERANT INTERVENTION PROCEDURES

Operant intervention procedures focus on discrete, observable behavior and the antecedent and consequent events that maintain that behavior. Behavioral control is achieved most often through the use of reinforcement and/or punishment paradigms that are contingent upon a specified behavior. Many social behaviors, however, can be controlled by manipulating preceding events, such as having a peer ask another child to play or a teacher cueing a child to initiate play.

Young children often fail to interact successfully because of a nonresponsive or inhospitable social environment. Here, the use of antecedent control can serve to facilitate a positive environment and elicit positive social interactions. With these procedures, a teacher or other intervention agent makes wide use of cueing and prompting (Elliott & Gresham, 1991). The key assumption with antecedent control procedures is that a child possesses the necessary social skills, but, however, the child is not performing them at an acceptable rate. Two of the most frequently used antecedent strategies are peer social initiation and cooperative learning.

Peer social initiations have been used by Fenning (1993) and Strain and his colleagues (Strain, Shores, & Timm, 1977) to increase the social interaction rates of socially withdrawn preschoolers. This intervention entails training similar-age peer confederates to initiate and maintain social interactions with a withdrawn or isolated child. Overall, this procedure has been effective in increasing positive social behavior in withdrawn preschoolers. It should be noted, however, that when a child's interaction rate approaches zero, peer initiations are likely to be less effective (Elliott & Gresham, 1991).

Another procedure that focuses on manipulating antecedent events is cooperative learning. Cooperative learning provides a prosocial environment where preschoolers work together to complete specified activities (Doescher & Sugawara, 1989). This procedure requires preschoolers to cooperate, share, and assist each other to complete a task and, as such, represents an effective method for increasing the likelihood of positive social behaviors. When implementing cooperative learning techniques, it is implicitly assumed that children know how to cooperate but are not doing so at optimal levels.

Many operant-learning procedures, that is, the manipulation of antecedents and consequents, have been used to decrease interfering problem behaviors while simultaneously increasing positive social behaviors. These procedures are based on the premise that behaviors are maintained by functional relationships. In other words, reinforcement contingencies (positive or negative) perpetuate low rates of positive social interactions and high rates of negative social interactions. For this reason, it is assumed that a child can perform positive social interaction skills, but does not demonstrate the skills owing to lack of reinforcement. Given the wealth of studies in this domain, only two of the most frequently used methods will be discussed: contingent social reinforcement and differential reinforcement. Group contingencies (e.g., McConnell, Sisson, Cort, & Strain, 1991) also are used frequently. However, because they have much in common with cooperative learning, they will not be discussed here.

Contingent social reinforcement involves publicly reinforcing a child for socially appropriate behaviors. Allen, Hart, Buell, Harris, and Wolf (1964) long ago demonstrated the efficacy of this method when they applied it to a four-year old socially isolated girl. Whenever she interacted with other children, an adult would publicly reinforce her social behavior. This procedure led to a six-fold increase in social interaction rates over baseline levels. Variations of this basic procedure have been successfully extended to children with selective mutism and children with severe and profound mental retardation (Fenning, 1993; Mayhew, Enyart, & Anderson, 1978). Although this procedure has been found effective, it can require an extraordinary amount of time to ensure that the reinforcement is delivered on a consistent basis. Unless reinforcement is given in a consistent manner, it is doubtful the intervention will be as effective. This type of contingent social reinforcement perhaps is best used to maintain social interaction rates established through the use of other social skills interventions.

Other operant-learning procedures used to modify social skills are differential reinforcement of other behavior (DRO), differential reinforcement of alternative behaviors (DRA), and differential reinforcement of low rates of responding (DRL). DRO and DRA are based on the omission of a specific behavior rather than the commission (Barnett, Bell, & Carey, 1999). Therefore, after a certain amount of time, reinforcement is given after any behavior except the target behavior. For example, if one wanted to decrease disruptive behavior while increasing socially appropriate behavior, any behavior exhibited besides disruptive behavior is reinforced after a certain amount of time has elapsed. Hence, this method serves to extinguish undesirable behaviors and increase all other behaviors. Pinkston, Reese, LeBlanc, and Baer (1973) successfully used DRO to decrease a boy's aggressive behavior while at the same time they implemented contingent social reinforcement to increase his positive social interaction. In this study, the teacher differentially reinforced positive peer interaction while she ignored aggressive behavior.

DRL involves reinforcement for reduction in the frequency of a target behavior. Reinforcers may be delivered either for reduction in overall frequency of a response within a particular time period or for increased elapsed time between responses (interresponse time). For example, if the criterion limit for the DRL was six incidents per hour, the target child would receive reinforcement only if six or fewer incidents were emitted in one hour. Dietz and Repp (1973) successfully used a full-session DRL procedure to decrease the amount of inappropriate talking in a classroom for students with mental retardation. The DRL contingency was five or fewer "talk outs" per 50-minute class period. This procedure also was applied as a group contingency because reinforcement was based upon the behavior of the entire class.

The aforementioned studies demonstrate that DRO and DRL are effective in decreasing interfering problem behaviors. These procedures probably are most effective, however, when used in conjunction with other social skills interventions, whereby one decreases socially inappropriate behavior while concurrently teaching or reinforcing positive social behaviors.

SOCIAL LEARNING INTERVENTION PROCEDURES

Social learning procedures can be traced back to the social learning theory of Bandura and Walters (1963) and Bandura (1977). From this perspective, social behavior is the result of two types of learning: observational learning and reinforced learning. Social learning theorists differentiate between the learning and the performance of a response. This distinction enables social learning theorists to advocate the process of modeling as a means to acquire new, socially appropriate behaviors. Modeling also affects previously learned responses through its disinhibitory and/or cueing effects. Therefore, children are vicariously reinforced (positively or negatively) by observing a model receiving reinforcement for a behavioral performance. In essence, observers tend to inhibit responses that they see punished in others, whereas they are likely to perform modeled behaviors that elicit desired reinforcers.

Modeling has substantial empirical support for the promotion of social skills with children and youth (Gresham, 1985; Wandless & Prinz, 1982). For social skills training, modeling can be divided into two types: (a) live modeling, where the target child observes the social behaviors of models in naturalistic settings (e.g., the classroom), and (b) symbolic modeling, in which the target child observes the social behaviors of a model through film or videotape. Both types of modeling have been effective in remediating social skills deficits. However, most research has focused on symbolic modeling owing to the degree of experimental control afforded by videotaped models. Live modeling, however, may be more flexible and efficient in a classroom setting. For instance, Matson, Fee, Coe, and Smith (1991) used peer and puppet models as a novel way to effect a positive change in the social behaviors of preschoolers with developmental disabilities.

A powerful development in the realm of social learning has been peer mediated interventions. These interventions are based on the premise that peers can be effective change agents for other children with social skills performance deficits (Berndt & Ladd, 1989). Empirically, it has been shown that peers can serve to differentially reinforce appropriate social interactions and influence the occurrence of positive social behaviors (Mathur & Rutherford, 1991). Peer-mediated interventions may be more successful than teacher-mediated interventions because peer confederates may be better able to consistently monitor and differentially reinforce their peers. Additionally, peer mediation can be cost effective because it minimizes teacher involvement.

COGNITIVE-BEHAVIORAL INTERVENTION PROCEDURES

Cognitive-behavioral intervention procedures are a loosely bound group of procedures that focus on a child's internal regulation of her or his behavior. In particular, cognitive-behavioral approaches to social skills training emphasize a child's ability to problem solve and to self-regulate behavior. For preschoolers, two of the most frequently used cognitive-behavioral social skills procedures are coaching and problem solving.

Coaching, unlike modeling, is a direct verbal instruction technique that involves a "coach" (usually a teacher or a psychologist, and occasionally a peer) who has knowledge about how to enact a desired behavior. Most coaching procedures involve three basic steps: (a) A student is presented with rules for, or the standards of, a specific behavior; (b) a selected social skill(s) is rehearsed with the coach; and (c) the coach provides specific informational feedback during behavioral rehearsal and gives suggestions for future performances. In some instances, modeling may be included in the coaching procedure to give the child a better understanding of the topography of the social behavior and, if praise is given, reinforcement may occur. Therefore, coaching, although conceptualized as a procedure that requires the child's cognitive skills to translate instruction into desired behaviors, can be enhanced with behavioral and/or social learning procedures.

Coaching has received considerable empirical support as a social skills training procedure (Mize, 1995). For example, Oden and Asher (1977) used coaching to effectively teach participation, communication, cooperation, and peer reinforcement. In addition, sociometric ratings of coached students increased when compared to non-coached students. Ladd (1981) obtained similar results using a coaching procedure as did Gottman, Gonso, and Schuler (1976).

Several interventions have been developed that stress teaching children the process of solving social or interpersonal problems as a way to facilitate socially appropriate behaviors. As Weissburg (1985) pointed out, some of these intervention programs, which are largely classroom-based have been called social problem solving (SPS) programs, whereas others have been called interpersonal cognitive problem solving (ICPS) programs. ICPS programs generally place greater emphasis on cognitions that parallel social problem situations and employ narrower training procedures than SPS approaches. However, both use a similar training sequence to help students identify and cope with social problems. Briefly, the steps can be described as (a) identify and define the problem, (b) determine alternate ways of reacting to the problem, (c) predict consequences for each alternative reaction, and (d) select the "best" or most adaptive alternative. Social problem-solving methods can be used with individual children or with entire classrooms. It should be noted, however, that these methods often are too cognitively complex for most preschoolers and do not focus on discrete social skills training; learning social skills generally requires more skill-oriented, externally-reinforcing procedures than offered by a strictly cognitive approach.

EXAMPLE OF A CLASS-WIDE SOCIAL SKILLS INTERVENTION: THE RESPONSIVE CLASSROOM

The Responsive Classroom (Charney & Wood, 1981) is an instructional approach that integrates the teaching of social and academic skills as part of everyday school life. This approach has been implemented successfully in preschool and elementary classrooms and is predicated on the belief that classrooms providing socially supportive environments (i.e., facilitate acceptance, positive interpersonal relationships, and responsibility) enable children to learn most effectively. The RC approach is composed of six components: (a) morning meeting, (b) classroom organization, (c) rules and logical consequences, (d) guided discovery, (e) academic choice time, and (f) assessment and reporting.

Morning meeting (MM) begins each day in a Responsive Classroom (RC) and provides children with the opportunity to greet each other, share academic and social news, participate in engaging start-up activities, and learn about the academic goals for the day ahead. This meeting also provides teachers with an opportunity to teach specific social skills and students with an opportunity to practice these skills in role play situations. After introducing a social skill in MM, teachers can provide feedback (and follow-up instruction) regarding the social skill throughout the school day. During MM, children sit in a circle with their teacher in an effort to build a sense of belonging, significance, and fun. The physical environment of the classroom is an important consideration in implementing the RC approach. In RC classrooms, teachers pay particular attention to students' physical skills as well as their academic skills. As a result, RC teachers attempt to match furniture, centers, routines, and time devoted to an activity with the current skills of their students.

Rules and logical consequences is a positive approach to discipline in the classroom. The primary goal of this approach is to help students develop self-control so they can effectively function within social communities like the classroom environment. In addition, developing self-control reduces off-task behavior and increases engaged time. This in turn allows children to receive maximal benefits from instruction. To facilitate students' development of self-control, teachers in RC classrooms emphasize modeling, practice, and role playing of expectations for behavior. In addition, teachers develop and use logical consequences for inappropriate classroom behavior that are fair and consistent with the behavior.

Guided discovery (GD) is an instructional practice designed to introduce students to curriculum materials, learning centers, or processes within a teacher's classroom (Charney, 1992). The primary goal of GD is to excite students about learning while teaching them how to make good choices within the classroom. GD takes children through a carefully planned instructional sequence that begins with an introduction to the applications of knowledge and ends with students extending concepts through small group or independent activities.

The RC approach requires teachers to structure classroom work so that student assignments reflect a balance between teacher-assigned work and work that students choose from an array of possibilities. These choice times allow students to conduct independent and/or cooperative "research" projects. Choice time also enables students to develop study skills, such as producing work to meet a timeline, and provides students with opportunities to share their work with other students in the classroom.

Finally, the RC approach encourages teachers to use alternative methods to assess students' work and to combine these assessments with more common measures of achievement (e.g., classroom tests, standardized tests). The approach also supports reporting student progress to parents on a continuum rather than synthesizing all information into a single grade. RC teachers are expected to engage parents and students in goal setting at the beginning of each year. This establishes a foundation for meaningful communications between teachers and parents regarding the student's social and academic progress throughout the academic year. It also provides an open line of communication regarding the student's classroom behavior and invites parents to become active participants in their child's education.

These six components comprise the RC approach and allow teachers to introduce instruction of social skills in the classroom. Teachers in more than 100 schools in the United States have been trained to implement the RC approach. Evaluation studies conducted with children ages 4–12 by Elliott (1993, 1995, 1998) indicate that the RC approach is an acceptable and effective method for enhancing the social behavior of young children, and appears to create conditions that foster academic achievement. Specific findings replicated across these studies include:

1. The frequency of students' problem behaviors decreases significantly with a year or more exposure to instruction that is organized and delivered within the RC approach.

2. The frequency of students' social skills increases significantly in classrooms where students consistently have been exposed to instruction that reflects the RC approach.

3. The social skills taught and reinforced in the RC approach appear to function as academic enablers, resulting in improved scores on achievement tests.

Although results from these initial studies are promising, it is important to note that these conclusions are based on evaluation projects with moderate samples of students and small numbers of schools.

Effectiveness of Interventions and Suggestions for Practice

The popularity and widespread use of social skills training procedures have resulted in several major reviews of the effectiveness of these procedures with children (see Cartledge & Milburn, 1995; Elliott & Gresham, 1993; Gresham, 1981, 1985; Ladd & Mize, 1983; Schneider & Byrne, 1985). Schneider and Byrne, who conducted a large meta-analysis of social skills training studies, indicated that social skills interventions were more effective for preschoolers and adolescents than elementary children. No gender differences in effect sizes were noted, although few studies have treated gender as an independent variable. In addition, social skills training was found to be more effective for students exhibiting social withdrawal or learning disabilities than for aggressive students.

Based on reviews of research (e.g., Elliott & Gresham, 1993; Mastropieri & Scruggs, 1985; Schneider & Byrne, 1985; Zaragoza, Vaughan, & McIntosh, 1991) there appears to be substantial support for the effectiveness of social skills training procedures in general, and in particular for operant and modeling procedures for preschoolers. Practical suggestions from the research literature for facilitating the development of social skills in young children include the extensive use of operant methods to reinforce existing social skills. These basic operant tactics include (a) manipulation of environmental conditions to create opportunities for social interactions that prompt/cue socially desired behavior in a target child and (b) manipulation of consequences so that socially appropriate behavior is reinforced and socially inappropriate behavior, whenever possible, is ignored rather than punished. In addition, modeling of appropriate social behavior supplemented with coaching, feedback, and reinforcement should be a primary tactic in developing new social behaviors in children.

Facilitating Generalization of Social Skills

Social skills training often results in positive outcomes. However, treatment effects often are short lived and do not generalize to other settings or behaviors (DuPaul & Eckert, 1994). For treatments delivered in social skills training to be considered truly effective and valid, levels of change must evidence treatment generality. Treatment generality is composed of maintenance (behavior change that persists over time) and generalization (behavior changes that occur under nontraining conditions). Although treatment generality often is evaluated as a "hope-for-the-best" side effect of social skills training, maintenance and generalization should be systematic facets of any intervention. Several authors have discussed procedures to enhance treatment generality (e.g., Gresham, 1994; Stokes & Osnes, 1989). These generality facilitators include (a) targeting behaviors that will be maintained by natural reinforcement contingencies; (b) training across different behaviors, settings, and persons; (c) training loosely (i.e., varying stimuli such as reinforcers, tone of voice); (d) systematically withdrawing or fading intervention procedures to approximate the natural environment; (e) reinforcing behavior change in novel and appropriate settings; (f) including peers in training; and (g) providing booster sessions. Programming for generality should occur for both child and treatment agent (e.g., parent, teacher) behaviors. Incorporating as many generality facilitators as possible into social skills interventions should enhance the likelihood of treatment maintenance and generalization.

Evaluation of Intervention Effectiveness

The final leg of the social skills training journey invariably rests with the deceptively simple question, "Was the intervention effective?" Although many practitioners and researchers assess treatment effectiveness as a matter of course, methodologically sound measurement often is overlooked in evaluations of intervention effectiveness. Treatment evaluation extends beyond simply assessing changes in social skills at the completion of treatment. Evaluation should include ongoing assessments of acceptability, integrity, social validity, and generality. Ideally, assessments of intervention effectiveness will be multifaceted, involving multiple settings, informants, and methods.

Important advances in the monitoring and the evaluation of interventions have occurred recently. These advances include the use of goal attainment scaling (Sladeczek, Elliott, Kratochwill, Robertson-Mjaanes, & Stoiber, in press), progress monitoring records (Figure 1) (Elliott & Gresham, 1991), reliability change indexing (Gresham & Noell, 1993), and the integration of visual and statistical analyses (Busse, Kratochwill, & Elliott, 1995). The progress-monitoring record illustrated in Figure 1 often has been used as part of a goal-setting and self-monitoring process with elementary and middle-school students. However, no reports of its use with preschoolers have been published.

SUMMARY

Identifying and using interventions that effectively teach young children social skills may be one of the most important activities for school psychologists given the critical role that social skills play in the academic, social, and emotional development of children. Social skills are clearly one of the key elements in learning about how to care and in caring about learning from other people.

School psychologists involved in school readiness screening or who consult with preschool and kindergarten transition programs will have opportunities to use many of the intervention techniques described in this chapter. Psychologists who also are involved in parenting classes for high school students and/or young parents will find numerous opportunities to translate knowledge about social skills intervention into practice. Finally, whenever possible school psychologists are encouraged to write brief newsletter or newspaper articles describing key steps parents and caregivers can take to facilitate the development of young children's social skills. In all cases, it is important to emphasize the power of positive peer and adult models for young and older learners alike because social skills provide an important foundation for learning and caring at school and in the community.

Figure 1. A social skills intervention progress monitoring record sheet.

A Social Skills Intervention Progress-Monitoring Record

Student's Name____________________________ Teacher/Grade________________________
Group Leader______________________________ Date Program Began__________________

Skill Domains, Subdomains, and Behavioral Objectives	Progress Assessment				
	Check skills to be taught	No progress	Improvement observed	Mastered in treatment group	Generalized
Cooperation					
1. Ignoring distractions	______	______	______	______	______
2. Making transitions	______	______	______	______	______
3. Using free time	______	______	______	______	______
Classroom interaction skills					
1. Finishing assignments on time	______	______	______	______	______
2. Keeping desk clean, putting away materials	______	______	______	______	______
3. Producing correct work	______	______	______	______	______
4. Paying attention and following directions	______	______	______	______	______
5. Using time appropriately when waiting	______	______	______	______	______
Assertion					
Conversation skills					
1. Giving a compliment	______	______	______	______	______
2. Introducing oneself	______	______	______	______	______
3. Making positive self-statements	______	______	______	______	______
4. Initiating conversations	______	______	______	______	______
5. Telling an adult about unfair treatment	______	______	______	______	______
Joining and volunteering skills					
1. Joining ongoing activities	______	______	______	______	______
2. Volunteering to help peers	______	______	______	______	______
3. Inviting others to join activities	______	______	______	______	______
Responsibility					
1. Asking an adult for help	______	______	______	______	______
2. Paying attention to a speaker	______	______	______	______	______
3. Refusing unreasonable requests	______	______	______	______	______
4. Answering the telephone	______	______	______	______	______
5. Introducing oneself to new people	______	______	______	______	______
6. Asking permission to use property	______	______	______	______	______
7. Asking permission to leave house/property	______	______	______	______	______
8. Reporting accidents to appropriate persons	______	______	______	______	______
9. Questioning rules that may be unfair	______	______	______	______	______
10. Responding to a compliment	______	______	______	______	______

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Oriented toward social skills training as a part of school curriculum. Part I sets out general assessment and teaching procedures. Part II focuses on specific populations: behavior disordered, young children, and adolescents.

Charney, R. S. (1992). *Teaching children to care: Management in the Responsive Classroom.* Greenfield, MA: Northeast Foundation for Children.

This book lays the foundation for creating a caring school environment and provides specific classroom tactics that facilitate the development of constructive communications among students and teacher. The six components of the Responsive Classroom approach to instruction are described and illustrated with vignettes.

Elias, M. J., Zins, J. E., Weissberg, R. P., Frey, K. S., Greenberg, M. T., Haynes, N. M., Kessler, R., Schwab-Stone, M. E., & Shriver, T. P. (1997). *Promoting social and emotional learning: Guidelines for educators.* Alexandria, VA: Association for Supervision and Curriculum Development.

The authors of this book draw upon research, theories, and successful efforts of educators to provide guidelines to help school officials to design and implement comprehensive programs to enhance the social and emotional development of children preschool through high school. The guidelines are stated in detail and are supported with numerous examples.

Elliott, S. N., & Gresham, F. M. (1991). *Social skills intervention guide: Practical strategies for social skills training.* Circle Pines, MN: American Guidance Service.

This practical guidebook is an extension of the *Social Skills Rating System* (SSRS) (Gresham & Elliott, 1990) and provides lesson plans for 43 of the social skills assessed on the SSRS. The lessons are presented in a tell-show-do instructional group format. Psychologists, counselors, or teachers are considered group leaders. A rich assortment of tables and figures are provided to support implementation of the basic strategies and communication with parents and others.

AUTHOR NOTE

Portions of this chapter are from a chapter by the same title that appeared in *Best Practices in School Psychology III.* The authors would like to thank Joan Ershler, Caroline Racine, and Randy Busse for their contributions to earlier versions of this chapter.

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Best Practices in Crisis Prevention and Management

Scott Poland
Gayle Pitcher
Cypress-Fairbanks Public Schools
Philip M. Lazarus
Florida International University

OVERVIEW

Since the last edition of this book was published, small towns with names like Paducah, Kentucky; Jonesboro, Arkansas; Littleton, Colorado (Columbine); Santee, California; and El Cajon, California, are now known worldwide as sites where bloodshed has penetrated our schools. Nationwide, parents and teachers and administrators and the local governments have been trying to cope with this violence by intensifying their awareness of crisis intervention and the role it must play in lessening the chance that another child will walk into school one day with a gun. The first author led or served on national crisis teams in Paducah, Jonesboro, and Littleton, and he and the third author were consultants and trainers in Lake Worth, Florida, where a 13-year-old boy with a .25 caliber semi-automatic pistol shot and killed a teacher on the last day of school.

But what can be done to prevent more violence and crisis incidents? Most communities are attempting to answer that question, and varied organizations and government institutions (e.g., National Education Association (NEA), U.S. Department of Justice, U.S. Department of Education, The Center for Effective Collaboration and Practice, and the American Institutes for Research) have joined the National Association of School Psychologists (NASP) in a zealous effort to study and develop recommendations for improving school safety. As a result the recognition of and resources dedicated to crisis intervention are quite vast in comparison with those of a decade ago.

During the recent past many questions have been raised about the role of school psychologists. In the aftermath of school tragedies school psychologists' roles in developing interventions range from very minor to pivotal. There also appears to have been a turnaround in the formal preparation for school psychologists in the area of crisis planning and management. As late as 1993 (Lazarus and Phelps, 1993) professionals were expressing concern regarding the lack of systematic course work in crisis intervention—or psychologist first aid—in most school psychology training programs. As this is being written, however, crisis intervention appears to be rapidly on its way to becoming a more standard part of training and practice in the field of school psychology. A series of workshops offered in the 1990s, together with recently published practical manuals and literature (Poland & McCormick, 1999; National Education Association, 1999), has been used to begin to educate practitioners on how to deliver crisis intervention services and develop crisis response teams.

Some universities offer complete classes in school safety and crisis prevention or intervention (Larson, 1994).

Since the late 1990s there has been increasing attention toward the need to reduce all levels of violence in our schools (Gottfredson, 1997; Guerra & Williams, 1996). In 1998, shortly after the shootings in Paducah, Kentucky, and Jonesboro, Arkansas, President Clinton called for an annual National Report on School Violence and personally conducted a meeting on school violence that the first author attended. During that same year the Principal/School Disciplinarian Survey on School Violence 1996–1997 was released by the National Center for Education Statistics (1998). The report highlighted the following points:

- One in 10 schools reported a violent crime.
- 15% of teachers reported either being threatened or injured.
- 4.2% of secondary students reported being the victim of a violent crime at school.

More than half of the schools reported a crime during the year, and 1 in 10 schools reported a serious violent crime (i.e., rape, robbery, fights with weapons).

Other statistics corroborated the basic tenant that American schools are violent milieus, and that school violence is on the rise. Poland and McCormick (1999) cited governmental statistics that indicated that the number of deaths on school grounds has actually declined since the early 1990s and that fewer than 1% of the violent deaths for children in 1998 occurred at school. The number of multiple homicides at school has increased, and the Columbine shootings was arguably the number one news story of 1999.

Certainly the field of school psychology (along with many professionals in education) appears to be turning its attention to school safety and violence prevention. The number of NASP presentations on school violence and school violence prevention increased significantly in the late 1990s. Several excellent guides are now available that direct attention toward preventing school violence, such as that written by Goldstein and Conoley (1997) and others that are listed in the annotated bibliography.

Overall, crisis preparedness appears to be no less important but much more accepted by most educational systems in the dawn of this new millennium. What remains to be seen is whether the school safety attention, publications, and research will translate into primary prevention programs that will result in safer and healthier educational environments.

BASIC CONSIDERATIONS

Decades ago, Jerome Caplan wrote about primary, secondary, and tertiary prevention (Caplan, 1964). These concepts continue to be paramount in crisis intervention. Primary prevention includes activities that prevent crises from occurring altogether; secondary prevention includes activities that arrest potential crises from escalating; and tertiary prevention aims to repair damage resulting from the occurrence of a crisis (i.e., crisis management). There is much discussion of school safety and crisis planning. There is debate about whether approaches only utilizing hardware such as metal detectors and surveillance cameras are the most effective utilization of resources. The wise principal or school superintendent should form safety task forces that include parents and students to determine what safety and prevention programs should be in place. Will prevention programs be implemented by school systems in an effective manner, and will children learn to solve problems, manage their anger, and get along with others regardless of race? School psychologists will be important players in the resolution of these questions. We can advocate for safety task forces and stress that school safety is an "inside job" that requires a commitment from students, faculty, parents, and the community.

This chapter will outline a practical model for crisis intervention in the schools that will enable school systems to organize and respond effectively in the face of a crisis. The model first establishes competent (prepared) reaction to crises and then offers pointers on the management issues during the aftermath of a crisis and in particular (common) crises. The chapter then moves on to summarize overall knowledge and resources now available to prevent school violence and create safe school environments. Information is summarized from some relatively early works (Pitcher & Poland, 1992) as well as the most recent manuals and compendiums (Poland & McCormick, 1999; National Education Association, 1999; Dwyer, Osher, & Warger, 1998, 2000).

BEST PRACTICES IN PRIMARY PREVENTION: BEFORE THE CRISIS

Safe Schools: Violence Prevention

Should it be surprising that the United Sates has high rates of school violence? School violence appears to be a logical outgrowth of the relatively violent society in which we live. We have high rates of violent behavior in society overall, high rates of family violence (Stark & Flitcraft, 1988) and high rates of television violence (Osofsky, 1997). Can the schools solve all of society's violence problems? Of course not, but schools can positively affect the environment to make it psychologically and physically safer for students (Elliott, Hamburg, & Williams, 1998; Elliott & Mihalic, 1997). American schools, while bearing the brunt of a societal problem, are also potentially a site for learning (and teaching) how to contain and manage societal violence.

Reviews of the literature suggest that there are certain characteristics of schools that appear to be associated with violent behavior (Goldstein & Conoley, 1997). Overall, the information suggests that the more personal and positive the school environment, the lower the level of violence. For example, increased levels of school violence are associated with high levels of arbitrary decision making among school disciplinarians, severe disciplinary actions, large school size, and crowding. We know that large, public, urban schools are typically the educational environments associated with the highest rates of violence. Furthermore, school violence occurs more often in unsupervised, crowded zones such as lockers, restrooms, and hallways.

Conversely, several factors appear to be linked to reduced violence in schools, including educational environments that foster positive academic and social success. Anyone who has worked in educational settings quickly realizes that many of the angriest, most withdrawn students have academic difficulties that predate their behavioral and emotional difficulties. Therefore, the need for effective early intervention programs and a variety of programming alternatives appears even more urgent when taking into account school safety and violence issues.

Fostering positive relationships among students, teachers, and administrators is another factor associated with a safe, well-functioning school. Community involvement and support also helps to personalize a school and is associated with lower levels of student violence. The availability of extracurricular activities to large portions of the student body is another positive contributor to school safety. The factors we know to be associated with safer and less safe school environments are no great surprise for professionals in education. The challenge, however, appears to be in establishing a personal, positive, orderly but supportive educational environment in large (often overcrowded) schools.

There are numerous approaches to violence prevention. Many excellent resources are now available to help schools address these issues and to form a comprehensive preventive program in regard to school violence. As part of the Clinton administration campaign to ensure the safety and well being of school children, the publication *Safeguarding Our Children: An Action Guide* (Dwyer et al., 2000), was intended to be a companion piece to *Early Warning, Timely Response: A Guide to Safe Schools* (Dwyer et al., 1998). These practical and useful guides were developed through the collaborative efforts of the U.S. Department of Justice, the U.S. Department of Education, the Center for Effective Collaboration and Practice (CECP) of the American Institutes for Research (AIR), and NASP, and are highly recommended.

Overall, the interventions recommended throughout the literature in these areas are multiple, and generally emphasize exposing all students to conflict resolution, social problem solving methods, and anger management (Hudley, 1994; Larson, 1994; Loeber & Farrington, 1998). Most importantly, a comprehensive, multifaceted approach that includes media, families, and community members appears to be most effective. A few other promising approaches are considered below.

THE PERSONAL TOUCH: MENTORING PROGRAMS

A caring, supportive adult who is concerned for a young person's well-being is essential to healthy emotional development. Lack of these kinds of relationships appears to contribute to violent behavior. As families break up and scatter, schools may find they are the next in line to support children who otherwise have little support. Additional personal attention in the form of mentoring programs in the schools (volunteers to motivate, practice reading on an individual basis) and in the community (Big Brothers, Big Sisters) holds promise. Within the school, smaller classes might be a great way to get started. If this is not a feasible option, then having a climate where each student develops a friendly, positive relationship with at least one adult in the school environment is essential.

LEARNING BETTER SOCIAL/LIFE SKILLS

Several excellent, well-organized curricula have been developed for education of all students (Poland and McCormick, 1999). These lessons should ideally begin in primary grades and continue through high school. At least 10–20 lessons should be included during the first year with 5–10 booster sessions during the following 2 years. The content of these programs should be based on well-established skills such as anger management, social perspective taking, social problem solving, peer negotiation, conflict management, peer resistance skills, active listening, and effective communication. Specific messages should be included, such as it is not right to keep secrets in regard to friends making threats (a familiar message in regard to suicide intervention programs). Most youths that commit violence will have spoken to peers about it prior to taking action.

IMPROVING ENVIRONMENTAL FACTORS

The overall direction of effective interventions in this area is to personalize the environment by making it more pleasant and by encouraging the students. Lower levels of violence emerge when students have some (age-appropriate) ownership of "their" school. For example, displays of students' artwork and projects promote school spirit. Offering merit awards by recognizing at least two students each week for positive behavior has also proven useful in many schools.

Crowd control can make a school environment feel more personal. Staggering class schedules to reduce crowds in the hallways, or providing additional teachers or volunteers to support/supervise in hallways and near lockers during crowded times, can also have a positive effect. Significant improvements in school atmosphere as well as reduced discipline problems have resulted when schools have dress codes that are consistently enforced. Improved lighting and a well-kept facility increase student pride. Reductions in violence are often associated with closer supervision of the contents of student lockers. A proven positive effect in many schools is the use of see-through book bags and/or a complete removal of lockers.

INTERVENING WITH AT-RISK STUDENTS

Studies of violent incidents in schools in the United States noted that most of the youths who committed violent acts in school had a history of emotional disturbance. Some were capable of carefully planning their attacks and also were isolated socially: They were rejected by their peer group, had poor social skills, and lacked parental supervision. Many explicitly told others of their violent plans before following through with those plans, and most of the perpetrators had easy access to weapons.

However, many students who fit this profile will not commit a violent act. The question of how to identify at-risk students is being studied by many researchers and government agencies such as the Federal Bureau of Investigation. Early intervention at the first signs of "at-risk" patterns is the first priority. Fellow students must also learn to report any threatening statements immediately, as many have already learned in suicide intervention programs.

INVOLVING STAFF, STUDENTS, AND PARENTS

It is important to have these groups involved in building and in system-wide safety task forces. In addition to addressing safety concerns, these task forces can identify priorities and obtain a commitment from participants. It is essential that we implement programs to *end the conspiracy of silence* that allows weapons in schools and threats of violence to go unreported. Our experience has been that peers are almost always aware of threats of violence or suicide. Each student and parent in our school system signs a "safety pledge" in which students are pledging that they will let adults determine the seriousness of threats, immediately report to an adult the presence of a weapon on campus, and work on managing their anger and getting along with others regardless of race or ethnicity.

School staff must also take responsibility to stop violence from escalating by forbidding taunting, teasing, and bullying. All schools have signs that say, "No drugs, no weapons." "No bullying, no teasing" should be added, and all educators should ensure that it is not allowed.

BEST PRACTICES IN PLANNING A SYSTEM-WIDE CRISIS MANAGEMENT PROGRAM

Parents, faculty, and the media frequently ask what's being done to protect our schools? Administrators are expected to prevent and also to prepare for traumatic events. To a greater degree than ever before the schools are coordinating crisis intervention activities, even when a traumatic event occurs outside the school building. Schools are often scrutinized by the entire community for making the "right" decisions under pressure during these circumstances. Developing a plan to manage traumatic events takes much forethought and advanced planning. School districts that have developed crisis event procedures and activities are able to manage crises in a convincing and reassuring manner.

Especially useful is a crisis plan that provides procedures for identifying degrees of hazard and levels of response associated with the hazard. For example, the NEA suggests a monitor level (raising awareness of potential problems), a standby level (when a threatening event may be imminent), and an emergency level (all resources are deployed).

Models for the Formation of a Crisis Team

The sudden flood of demands from every aspect of the school environment is perhaps the most overwhelming characteristic of a crisis: Telephone lines are tied up; all parents need to know what to do; information must be gathered regarding exactly what has occurred; the students must be contained and calmed; victims must be tended to; the media must be managed; and the staff needs assistance, information, and reassurance. In addition, communication lines with the administration must be open. How can all of these tasks be completed in a timely fashion and in orchestration with the others? One element that appears to be ubiquitous in system-wide responses to man-made or natural disaster is the necessity of teams—teams that have been selected and prepared prior to the occurrence of the traumatic event. School psychologists, it is hoped, will be asked to help design the school district/building plan and also to function as a team member.

The overall structure of the teams can be somewhat flexible, based on various demographic characteristics such as size of the school district and resources of the campus staff. Several questions have arisen and been debated in the literature regarding the formation of the building teams (Schoenfeld, 1993; Peterson & Straub, 1992; Pitcher & Poland, 1992). Issues such as the following need to be addressed: How many coordinators are necessary? How many individuals should be identified for each team? Should the individuals be full time campus staff or district wide staff? The resolutions are typically different on each campus. Overall, it appears to be most productive to include personnel from the district level or the community in the case of a more severe incident (campus violence, deaths, etc.). The school district staff are often personally connected to the event and, consequently, highly stressed. Many authors suggest the establishment of two teams: one is the building (front line) team and the other is at the district or local level to assist the building team. District personnel are often better able to manage the media than building personnel. District, state, or national level team members usually have the advantage of less personal involvement (and more objectivity) in addition to having more experience with crisis events. There are some excellent resources for guidance in the annotated bibliography relating to forming teams. One recently published resource book, *Coping With Crisis: Lessons Learned,* is particularly useful in this regard, providing many practical recommendations.

Several roles are almost mandatory in the formation of crisis teams. An overall coordinator (usually the building principal) who reports to the superintendent must be designated in advance. Sub-coordinators must also be pre-designated to manage key service areas including parents, teacher/staff/campus, counseling, medical, security, and media. When these people are selected in advance it allows them to prepare for their role by gathering information and making preparations pertinent to their area of responsibility.

The necessity of school crisis teams and regular review of crisis plans seems so obvious and essential today. However, a new principal recently commented that on his first day at the new school he asked his assistant principals to find the crisis plan. It took them three days to find the plan, and it had not been updated in 11 years. Shakespeare wrote in *Macbeth,* "A false sense of security is mortal's chiefest enemy."

In addition to serving on crisis teams, school psychologists can assure that crisis plans be reviewed annually.

Selection and Training Issues for Team Members

Who should participate on crisis teams? Individuals who have attributes and skills that will enable them to perform well. Team members need to be able to think clearly in circumstances that interrupt normal routine, are likely to escalate in intensity, and are likely to draw attention to the school and jeopardize the school's image. Team members also must be in a position to respond immediately despite their own emotional state, remain as calm as possible, and minimize effects of a disturbing event.

The crisis team should be willing to spend time in training and have time in their schedules to meet, even if a threatening event does not seem to be of immediate crisis proportions (such as a shooting at another school or a death off-campus). Owing to all of these demands, membership on the crisis team should be voluntary and need not necessarily correspond to an individual's job title.

The potential number of preparatory activities is extensive. The crisis response/prevention plans should incorporate input from school administrators, law enforcement agencies, hospitals, the fire department, mental health agencies, parent-teacher organizations, and other community partners. Input from these individuals is vital since, for example, law enforcement personnel will probably control the entire scene immediately during a crisis. School staff will need to have discussions in advance to know how to support the police efforts and rescue crews in the most constructive fashion. All of these individuals should then be informed of the plans. Some districts have generated flip charts where plans for each crisis are summarized beside each labeled crisis tab. Each employee, including substitute personnel, has a copy of the flip chart to guide his or her actions should a crisis occur.

Ruof and Harris (1988) recommend that team members receive as much as 30 hours of training. Certainly each team member should develop a checklist of crisis steps to guide their teams' efforts. Examples of preparatory activities include drafting of general letters to parents or faculty, arranging a calling tree, and arranging for a method to communicate with the teachers if information must be passed on during the school day. The NEA (1999) has listed sample letters and other "tools" for managing crises in the fourth volume of their excellent resource series entitled *Crisis Communications Guide and Toolkit* (volumes 1–4). As a quick review, a summary of the potential training and preparatory activities relevant to each crisis liaison role is listed in Table 1.

Table 1. **Possible preparatory activities for crisis team members**

Administrative

- Emergency communication to team members/higher-ups
- Overall evacuation plan
- Lock down signal
- Develop a folder for police with important information
- Create a crisis or emergency box
- Develop plans that include after school activities and summer sessions
- Have a website in place for everyday communication with parents and staff
- Design informational display for website in advance to modify at the time
- Designate a "reunion" spot for faculty, students, parents if scattered and plans for transporting large groups to that spot
- Procedures for canceling school, early dismissal, using the school as a shelter
- Instructions, activities for teachers if regular instruction needs to be suspended
- Establish a policy for funerals or memorial services

Staff

- Emergency communication system to warn and inform teachers
- Advance designation of teachers for various duties
- Plan for gathering and disseminating factual information to teachers
- Identification of acceptable substitute teachers (and inservice) subsequent to trauma that affects the teaching staff
- Instructions for managing troubled students in the classroom
- Establish communication channels for faculty to report threatening situations

Table 1. **(continued)**

• Establish a phone tree, which includes janitors, cooks, bus drivers, etc.
• Gather a list of "emergency" substitute teachers that is more extensive
Medical
• Establish emergency communication lines to obtain medical help
• Train staff on CPR and emergency medicine
• Discuss transportation and potential capabilities with local hospitals
• Gather information regarding staff trained in CPR and emergency medicine
• Ordering and maintaining emergency medical supplies
• Keep track of who is taken for medical treatment and to which facility
• Have a plan if school nurse is out
• Develop an emergency medical team
Student
• Supervision of emergency containment off campus
• Provisions for supervision after school hours (if parents cannot be reached)
• Provision of information to students
• Specification of disciplinary codes for violent student behavior
• Establish communication channels for students to report threatening situations
Parent
• Emergency communication to parents (website?)
• Develop a system to make emergency calls or contacts to parents
• Develop a system to utilize parent volunteers after a crisis
• Sample letter to parents
• Setting up/managing parent meeting
• Plans for disseminating factual information to parents
• Designate a nearby site to receive distraught parents
Counseling
• Designation either of "safe room" for talking after the incident (students and staff) or coordinate sending support personnel to affected classrooms
• Discussions with and plans for outside counseling support (short and long term)
• Advance preparations for anniversaries of a tragic event or a special remembrance
• Periodic screening and checking on those previously affected by a crisis
Media
• Containing and establishing limits for the media during the event
• Training staff in media issues, "dos and don'ts"
• Clarify district policy about media on campus
• Keep records of media requests and contacts
• Schedule press conferences
Security
• Establish a method for police to notify schools of dangerous community events
• Coordinate plans for students and staff for police operation during an emergency event
• Establish a method to notify law enforcement personnel in emergency
• Keep roadways clear so that medical and law enforcement personnel can get to the affected school
• Build positive relationships with students and implement prevention programs

Preparation of Materials and "Ready" Files

Some materials can be almost fully prepared before a crisis strikes, such as general school information, general information to parents regarding what to expect from shocked children, and a school information fact sheet or contact lists. Samples of letters and handouts are available in the NEA's (1999) *Crisis Communica-*

tions Guide and Toolkit or on-line at www.nea.org/crisis. Many larger districts share materials on a website. Shells and templates that can be prepared in advance are available in the NEA *Crisis Communications Guide and Toolkit* guide and in other resources. These samples include press statements, daily update fact sheets, memos to faculty on media interview, memos to press for pool coverage of funerals, volunteer orientation guides, and media interview request forms.

Emergency Box

Each school should prepare an emergency box of materials and identifying information should an evacuation be necessary. Items that should be included follow:

1. Medical supplies
2. Emergency cards for students and staff
3. Portable phone
4. Bull horn
5. Crisis team badges and/or vests
6. Blueprints and floor plans of the school
7. Maps that locate important shut off valves for sprinklers, gas, electricity, alarms, etc.
8. Master keys for school
9. Flashlights
10. Tools

It might be advisable to have more than one emergency box stored in different locations should an area of the school be inaccessible.

Emergency Signals

All school personnel including substitute teachers should know the separate emergency signals for "lock-down" and "evacuation."

1. Lock-down should be the signal for all staff and students to stay in classrooms away from doors and windows in a protected position until given an all clear signal.

2. Evacuation plans should include teachers taking their class rolls and being able to account for each student in their class. Plans should also include locations to which students would go when evacuating the school. Every school has different surroundings, but plans should include how to utilize nearby businesses, churches, and other schools to safeguard students and staff.

Crisis Drills

Once teams are in place, have received some training, and have prepared their basic materials, the schools should consider conducting crisis drills. Building evacuation, communication lines, and teacher preparedness all need to be tested. There are many examples and suggestions for conducting these drills in previously published manuscripts (Pitcher & Poland, 1992; Poland & McCormick, 1999). Drills should be conducted in such a way that they do not alarm staff and students and should be coordinated with local police and other agencies. It is helpful to place a sign at the front of the building indicating a crisis drill is being conducted.

Training Sessions

The details of the crisis plan should be carefully communicated to all staff, parents, community liaisons, and students. The responsibilities, agreements, and actions should be clearly outlined. Everyone needs to know his or her individual role as well as what to expect. A written summary document or reference flip chart is often useful. Teachers should keep a copy. Parents can be informed of crisis plans and safety activities through school system newsletters and articles in local papers. School psychologists could be involved in writing these articles.

BEST PRACTICES IN SECONDARY PREVENTION: DURING THE CRISIS

Implementing Crisis Intervention: Some Basic Skills

Probably the most pronounced aspect of a crisis in the schools is the intense emotional upset or "dis-equilibrium" experienced by the system immediately when a crisis occurs. With a previously developed plan of action, everyone should be aware of his or her role and have some idea of how the overall team will approach the problem. If there is no prior planning, then it is nearly impossible to form a reasonably well-orchestrated plan of action on the spot.

What To Do

TAKE ACTION AT CRITICAL STAGES

Usually the first issue is how to manage the pragmatic aspects of the crisis. Three waves descend on a school after a crisis:

1. Police and medical
2. Media
3. Parents

The administrator should have school police or assistant principals keep the roadway to the school clear so that police and emergency personnel can access the campus. School psychologists and other crisis team members should make plans for parents who descend on the school to be taken to a specific location, such as a nearby school, to await further information. These parents should be provided with periodic updates and be reunited with their children along with careful record keeping and sign-out procedures. The situation should be assessed, and, if necessary, calls for rescue, law enforcement, or medical help must be made. Next, the immediate needs of affected students and victims must be administered. For all of this to occur, communications must be made among the crisis team members and also to district administrative personnel. The media liaison or designated crisis team member should cooperate with the media but keep them contained off school grounds and away from staff and students. School board policies should be written to clarify the removal of media from school grounds when requested by school administrators. The National Guard in Jonesboro, Arkansas, was very helpful at controlling the media. Our experience has been that local media are usually not as difficult to manage as the national media.

SHARE INFORMATION AS IT BECOMES AVAILABLE

At the first opportunity, all staff members should be notified and given information and clear directions. The first step when a crisis occurs is to verify the facts. Staff will need to know what happened, where to go for safety, who has been affected, how to get help, and how to provide assistance. Verification can be accepted from eyewitness school staff and from the police or parents of the dead or injured. Once verification has taken place, school administration *must tell everyone the truth* in age-appropriate language and with careful consideration of cultural factors.

Within a few hours a public announcement should be made either in person or through a press release. Include in the message a statement that school officials are working together with law enforcement and medical personnel to manage the situation. Emphasize that there is a plan of action in place, that the information is in the process of being collected, and that further details will be forthcoming. A statement should also be developed for use by personnel answering telephone calls and for any websites.

MEETINGS

School psychologists should insist that before leaving school the day of the crisis the crisis team members meet and review what is working and support each other. If the issues continue for several days, then team members must meet daily, often in a short session to get organized, establish a to-do list, and assign staff to take action. The teaching staff should also be met with regularly with some unstructured time for informal discussion and emotional support. Too often teachers are not provided the opportunity to vent their emotions and to understand they are not alone.

SUPERVISED STUDENT AREAS

Do not send students home to empty houses. If schools must be recessed midday or if the end of the day has come, then students should not be allowed to leave campus unless they will not be alone. Parents and teachers should have been organized to provide a safe place for students to wait for their own parents or to be allowed, with parent permission, to go home with an adult other than their own parent.

FACULTY MEETING AND NOTIFICATION

A major subsequent issue is how to cope with the immediate and short-term emotional aftermath of the incident. Much as in personal crises, staff members experience overwhelming feelings of helplessness, denial, inadequacy, and confusion. Following the shock, staff and students continue to be at risk for longer-term effects of crisis: depression or burnout, physical symptoms, and disorganization of functional working relationships. Such long-term effects are thought to be especially pronounced if the crisis is not managed well or if individuals are not given an opportunity to vent, compare notes, let down emotionally, etc.

It is important to provide faculty members the opportunity to confront loss issues and possibly to seek outside support prior to confronting the students and parents. The principal sets the tone for whether the crisis will be dealt with or not. One principal whose school suffered a multiple homicide conducted weekly faculty meetings for 2 years, and it is believed that is why there were few transfers or early retirements. If verification of the death occurs while school is in session, then the most productive course of action involves a written memorandum to be hand delivered to each faculty member. In addition to stating the pertinent information (name of the deceased, cause of death and circumstances surrounding the death) the memo should include suggestions on how faculty members can assist the students.

TEACHER GUIDANCE

On the day of the crisis, every effort must be made to reassemble teachers prior to their departure even if just for a few minutes to schedule a faculty meeting the next morning before school. The school's calling tree should be utilized to contact staff members who are not at school and to provide updated information to all. Teachers should be told all known information regarding the incident. They should be provided with clear instructions regarding how and what to share with the students, procedures related to the safe rooms, how much of the traumatic intervention will take place in the classroom, how to manage the media, etc. Teachers should also be allowed time to talk among themselves regarding their personal reactions to the event. If a particularly traumatic event has occurred, then teachers may be tearful and require time to emote. A few back up staff such as familiar, trusted substitute teachers are normally needed since a few faculty members may find themselves unable to teach for part or all of the school day.

The majority of intervention assistance should take place in the classroom. Keeping most students in class, discussing the tragedy as a group, and providing therapeutic activities would be most beneficial. Consider this example: A high school of 800 has a popular student killed in an accident, and 20% of the student body is upset and grieving. The school would not have been built to accommodate 160 students in the counseling office so the majority of those affected will need to receive assistance in the classroom with knowledgeable and empowered teachers.

SCHEDULE A MEETING FOR PARENTS

Parents also need to know the facts and be given a chance to discuss them. Following an opportunity for parents to ventilate, information regarding typical childhood reactions to trauma should be disseminated, and strategies should be given to parents on how to handle them. Often the school district sends a letter to all parents listing what happened and what action the district is undertaking to address it. Resources should also be listed for seeking additional help. This is helpful and advised, but should not be a substitute for an actual parent meeting.

RETURNING TO THE SCHOOL BUILDING

When a disturbing incident has occurred at a school building or in the community, students and parents often fear coming to or returning to the school building. Much evidence in the area of community/natural disasters suggests that children and adolescents should be united with their families at the first reasonable opportunity in order to begin the healing process. However, once individuals have had time to get through the initial shock, return to routine (and the school building) is important for healing. School psychologists can help administrators recognize the importance of reopening school as quickly as possible.

Many school community members may be apprehensive about returning to school. However, school provides the one place that is easiest to deliver mental health assistance to all concerned, and it is the only place in many communities where everyone can be together, and that is why we recommend reopening schools as quickly as possible. In Jonesboro, for example, school was closed only one day after the shooting. It was therapeutic to have all students and staff return that quickly. Many of them visited the scene of the shooting and looked at the bullet holes in the walls. The bullet holes were not repaired for several days at the request of the national crisis team. Students have been observed being understandingly cautious about stepping into a room where a death has occurred. Parents should be welcomed to accompany their children. It is not unusual for students to walk around the room touching objects such as desks and chairs while telling their story about where they were and what they were doing when the tragedy occurred.

It is essential that all signs of blood be removed from a school building prior to returning students to school. One school superintendent in a personal conversation (D. Rawls, personal communication) discussed not only the need for a physical cleansing but also a spiritual one. Numerous cultures call for ceremonies of some type to remove bad spirits or karma from a building where a tragedy occurred. School psychologists can assist administrators to consider all cultural aspects.

CURRICULA ISSUES

Many professionals who have managed major crises know that curriculum must be set aside during the first days of school after a crisis has occurred. Various techniques have been used that involve incorporation of facing/coping with trauma into the daily lessons. Teachers who have already had some instruction in working with upset students and who are aware of how the use of talking, writing, music, artwork, projects, ceremonies, and rituals can greatly assist students. Teachers should not hesitate to acknowledge their own emotions. School psychologists should provide teachers an inservice on how to assist children in the aftermath of a tragedy.

It is not unusual for teachers to ignore the crisis and want to continue with the scheduled curriculum. While following the schedule of a student who had committed suicide, the first author was astounded when the teacher who was unaware that most of her class was crying asked, "Do you want to talk to them before or after they have their test this morning?" Teachers should be given clear directions from the administration to set aside the curriculum and deal with the emotionality.

PROVIDE OPPORTUNITIES FOR THE FACULTY TO TALK

It is important that the faculty express their emotions. The more quickly emotional assistance is offered the better the adjustment. Calling trees are helpful to provide faculty the opportunity to work through their own emotions and to receive assistance from significant others (Poland, 2000). Teachers have repeatedly stated that after tragedies they have not been provided the opportunity to vent their emotions. Post-tragedy meetings for school faculty should be mandatory and should not only provide logistical information but also the opportunity for faculty to share their own thoughts and feelings. School psychologists must attend these meetings and should play a pivotal role, but we must not take any notes about what the faculty says without their permission. Teachers have been very vocal in stating that in the area of school crisis they expect the administrator to

1. Tell the truth and not sweep things under the carpet

2. Be visible and available to all who are affected

3. Seek faculty input

4. Acknowledge their own thoughts and feelings and give others permission to do so

DO NOT UNDERESTIMATE THE IMPACT OF THE INCIDENT

Attempts to insist that everyone is "just fine" and that they must behave "normally" very often backfire. Staff and students can feel very alone in their grief, and a significant toll is taken on the building tone and camaraderie. Often a faculty or staff meeting following the traumatic incident provides an effective barometer of the level of grieving that is present. The more upset the faculty, the longer it will take the students to readjust. Again, time should be allotted for the venting of emotions with faculty, parents, and students in addition to addressing the more pragmatic or logistical issues. Weekly meetings have greatly assisted faculty in several communities where school shootings resulted in numerous lawsuits. Follow-up meetings held as long as 1 or 2 years after the crisis occurred are useful following many deaths.

COMMUNICATION

Use of the telephones to place or receive calls is generally impossible during a traumatic event in the community or in the building. The internet is a logical option in such cases or through alternative communication means that should have been established prior to the crisis event (walkie-talkies, a secured line, etc.). Communication to parents is especially problematic. Many parents will descend upon the school, and they should be met and directed to a nearby facility (perhaps the nearest unaffected school) where school crisis team members will give them frequent updates in a calm, professional manner. The parents of students injured or killed should be assigned a staff member to assist them with contacting and gathering family, driving, etc. If their child was injured or killed, then long-term follow-up services will be necessary.

MEDIA PROBLEMS

Individuals who have managed major schools crises often speak about the continuing issues surrounding media involvement. Media often return again and again on roughly 12-hour cycles and frequently make mistakes in reporting information accurately. The need for factual information is constant, and the media are persistent. Media coverage can be expected day after day, month after month, and year after year in the more severe incidents. Overall parameters should be set, staff should be coached on how to interact with the media, and overall control should be implemented. School psychologists have served as very effective media spokespersons.

Poland and McCormick (2000) have outlined specific suggestions for managing the media and have emphasized that prior planning and previously developed positive relationships with the media were helpful. Some key points follow:

1. Media coverage goes through stages based on hours:
    - 0–12 hours: Reporters scramble to get facts and answer, "What happened?"
    - 12–24 hours: Question is, "Who are the victims?"
    - 24–36 hours: Focus is on "Why?" and "Who is to blame?"
    - 36–72 hours: Media focus is in-depth analysis.
    - 72 hours forward: Funeral concerns and societal issues.
2. Local media do not normally pose a problem.
3. School board policy should give the principal authority to keep media off school grounds, and local or state police may be needed to enforce the policy.
4. Students should be shielded from interviews, and their parents alone can give permission for interviews.
5. School faculty should defer media requests to the designated spokesperson.
6. The designated spokesperson or persons should have received media training. Written statements should accompany verbal interviews.
7. Schools should cooperate with media requests with definite limits set regarding where the media can go and what they can do.
8. Columbine officials realized they could not control the 750 reporters covering the story, but they could control their reaction to them.
9. Media representatives should be encouraged to refrain from dramatizing, glorifying, or offering simple explanations for the perpetrators' actions.
10. School spokespersons should stress the positive steps taken by the school to help in the coping process and inform media of available assistance services.
11. Specific media guidelines have been outlined for the aftermath of suicide.
12. Research indicates that national news coverage of school violence increases the likelihood that other troubled students will carry out violent thoughts and plans.
13. National media attention should focus more on prevention activities and students and schools who have thwarted or foiled plots of violence.

BEST PRACTICES IN TERTIARY PREVENTION: AFTER THE CRISIS

After a crisis has passed a major job remains: moving beyond the crisis both emotionally and cognitively. Anniversary dates, re-visitation by the media, and the filing of lawsuits continue to contribute to the stress levels during the post-crisis period. Following a crisis, families, students, and faculties often search for a path back to a normal life and routine; however, life will never be quite the same again.

Insisting that everything is fine and avoiding discussion since it dredges up bad memories is not the most constructive approach. Counselors often refer to re-establishing routine after the incident as the "new normal" due to this phenomenon. More specifically, teams and school personnel need to stay involved and be on alert for the following issues:

STUDENT ISSUES: MAINTAIN THE VIGILANCE

Symptoms of an emotional shock often persist or emerge days and months after the incident(s). It is likely that students will continue to feel "unsafe" for some time or feel that their personal resources are not up to others' expectations.

Unfortunately there appears to be an increase for depression and suicide risk for adolescents following a traumatic event. Drinking and reckless behavior also escalate; therefore, long-term systemic care with periodic mental health screening is essential (R. Pynoos, personal communication).

PARENT ISSUES: MAINTAINING THE CONTACT

The crisis team should maintain contact with the victims and their families, and the school psychologist is the logical person to do so. Gradually we want to support their understanding of the incident(s) and support their re-entry into the school environment when the time is right. In some instances, questionnaires have been used to assess the emotional needs of staff and students following a traumatic incident and to determine what level of support or counseling was in order.

Increased mental health personnel were assigned to affected schools in Oklahoma City after the bombing and in Littleton, for example, and community mental health workers were assigned to affected families. A collaborative partnership must be formed between school personnel, local mental health agencies, judicial systems, and clergy. A victim advocate assigned to families in Jonesboro, Arkansas, commented, "You are never through assisting the family of a homicide victim." School psychologists are encouraged to develop partnerships with all community caregivers and to advocate for long-term assistance.

LAW ENFORCEMENT/SECURITY ISSUES

Additional security is often required for an extended time following a violent incident, since it is often comforting to traumatized individuals and helps them to feel safer. Parent, community, and school task forces are helpful in determining what changes should be made. Most beneficial would be a balance of hardware measures, such as more police, metal detectors, or surveillance cameras, and non-hardware measures, such as more mental health services and prevention programs.

WHEN IS IT NOT NEWS?

The school community should be prepared for ongoing and predictable media attention. Media coverage will resume when school resumes the next fall and on anniversary dates. Additional incidents of school violence often result in the media's revisiting the sites of previous violence. Court trial dates and release of information from police can also result in a return of the media.

MEMORIALS AND DONATIONS

Memorials and donations support the healing process. Often people want to help immediately, and, therefore, decisions regarding therapeutic activities should be made quickly. Such activities include making ribbons, writing songs, and making T-shirts in memory of victims. Many gifts, flowers, and remembrances of all kinds may be brought to a particular location following school shootings and other tragedies. At Columbine, for example, many such objects were taken to the park adjacent to the school. It is recommended that these items left behind be handled carefully. For example, items left at the Vietnam War Memorial in Washington, D.C., are catalogued and warehoused. School communities have taken pictures of remembrance objects left at the informal memorial site and created memory books.

Setting up a foundation or memorial fund is quite complex. A system will need to be established for depositing, warehousing, cataloging, and acknowledging donations. It can be healing for the community to participate in this endeavor. It is important, for example, that how the monies will be spent is agreed upon by a committee consisting of school personnel, students, and parents. Will the money be used for the school, the community, or specifically targeted to the victims of the tragedy? It is hoped these decisions can be made based on consensus and without conflict.

The community is often looking for the "gift of hope" as a sign that something permanent and positive has come from the tragedy. Poland and McCormick (1999) discuss this issue at length. An example is Stockton, California, where the donations were used to build a children's museum.

Permanent physical memorials appear to be best accomplished with time and emotional distance from the incident. It was almost 5 years before the memorial to the Oklahoma City bombing victims was completed. Jefferson County, Colorado, school board president Jon Destefano (personal communication) stressed the need to go slowly in planning memorials and to be prepared for many ups and downs of the recovery process. Issues such as memorial location deserve careful consideration since students should have access but not have to look at it each time they come to school. Students should also be involved in planning the memorial. Schools are often faced with the question of whether or not to have plaques and pictures of deceased students displayed at school. School psychologists can assist school administrators in creating policies that balance the needs of grieving families with that of the school community. A large high school that has a wall containing pictures of all those who have died who previously attended the school will have many such pictures. Caution must be the key word when deciding appropriate memorializing of suicide victims. The American Association of Suicidology guidelines are outlined by Poland (2000).

ANNIVERSARY AND BENCHMARK DATES

Anniversaries and other reminders of a traumatic incident often provoke emotional reactions in the survivors, perhaps more than one might anticipate. Possible triggers include the six-month anniversary date, the one-year anniversary date, and the first day of the new school year. Other similar traumas, even if geographically far removed, can trigger severe emotional reactions, even suicidal reactions. Individuals may need additional support during these times. Advanced warning allows individuals to anticipate the emotional shock associated with these events and to have some amount of expectations or control over the situation.

EVALUATING CRISIS INTERVENTION SERVICES

Crisis has been frequently recognized as a time of potential danger as well as potential opportunity. During and just subsequent to a crisis there is a reduced defensiveness or increased openness on the part of individuals. For educators a sudden shock can be a "teachable moment" to help children and adolescents learn to overcome fears, learn to cope with unsavory events, or revisit troubling experiences from the past that haunt them.

Following any traumatic incident the crisis team needs to meet to review how the plan did or did not work. Revisions, increases or decreases in designated staff, and production of materials are all best accomplished during the first few months back to school. It is hoped this time frame will allow the crisis team enough distance from the event to be objective, but not so much that the specifics of the incident fade from memory.

BEST PRACTICES IN RESPONDING TO COMMUNITY DISASTER AND SCHOOL-WIDE CRISIS

How and When to Utilize Outside Assistance

In many situations it has been constructive for schools to accept outside assistance. Schools often do not have the number of mental health professionals needed to cope with a major loss. Moreover, those they do have may have been personally affected. It is typically a wise move to form a partnership with local agencies, mental health personnel, and clergy. In a severe crisis event, national assistance is available from the American Red Cross, National Organization for Victim Assistance, and NASP's National Emergency Assistance Team (NEAT).

Natural Disasters

Emotional reactions to natural disasters are often severe (Peterson and Straub, 1992; Lazarus & Phelps, 1993) owing to various factors including the unpredictable nature of the event and children having been separated from their families. Knowing about the potential for natural disasters and being aware of how to manage them can be empowering for everyone. Learning about natural disasters that are of a higher probability in your area from a scientific, historic, and geographic perspective as well as safety precautions that can be taken can be incorporated into many curricula. It is important that each school designate the safest locations for staff and students to take shelter in the event of a natural disaster. School administrators should discuss the building's safest areas with the architectural firm that built it.

Signs of post-traumatic stress disorder are often present (see "Crisis Counseling" section for detail and references). During these times schools can often serve as a community resource by conducting meetings for parents, providing parents with information on how best to support their children, and also by providing parents with a forum to compare notes, and this is often a useful service. Resuming a daily routine as soon as is possible and assisting in the clean-up effort are often constructive experiences for those involved. An excellent resource in these areas is the American Red Cross (1999), which produces a *Family Disaster Plan and Personal Survival Guide* that discusses many of these issues. This organization, for example, has outlined four phases of disaster recovery: heroic, honeymoon, disillusionment, and construction. Additional information can be obtained through their website at www.redcross.org.

Managing Emotionality When Death Affects a School

Every school should give specific consideration to the adaptation of their crisis plan for crises involving a death. A plan will be needed that manages emotionality and that provides assistance to everyone concerned with the grieving process. While a death occurring at school is very rare, the death of a child attending a given school is, unfortunately, something all school psychologists are likely to encounter repeatedly during their career. Poland and McCormick (1999) discuss incidence figures from the Center for Disease Control, which estimate annual childhood death rates as follows: 1 in 1200 high school students, 1 in 3000 middle school students, and 1 in 4000 during the elementary school years. What follows are basic principles outlined by the literature on crisis intervention.

1. Suggestions for administrators: Administrators set the tone for the management of any building crisis. They should acknowledge the strong emotions involved when a death occurs and should encourage faculty and students to recognize and express their emotions. Adult willingness to acknowledge the emotional side of the event(s) provides a positive role model for students. The school psychologist should be a consultant to the principal to ensure that those affected have the opportunities to express their emotions.

2. Share as many facts as possible: The first step when a death occurs is to verify the facts. School administrators should contact acceptable sources such as the police and a close family member (deceased child's parents or faculty member's spouse) for verification. The administrator should then utilize the school-calling tree to notify all faculty members if school is not in session.

3. Faculty notification and meeting should be first and mandatory: This is important to provide faculty members the opportunity to confront loss issues and possibly to seek outside support prior to confronting the students and parent (Lieberman, 1998). A faculty meeting before school convenes is optimal. If verification of the death occurs while school is in session, then the most productive course of action involves a written memorandum to be hand delivered to each faculty member. In addition to stating the pertinent information (e.g., name of the deceased, cause of death, and circumstances surrounding the death) the memo should also include suggestions on how faculty members can assist the students. The public address system can be used to deliver sad news, but the wise principal would choose the words carefully, rehearse the message, and recognize that voice tone and inflection will be very important in setting the attitude for the school.

4. Conducting a parent meeting: A major tragedy at school often results in the school being like the epicenter of an earthquake with parents, students, and community members coming to the affected school in search of both answers and assistance. The first author was the main presenter for audiences of hundreds and even thousands following school shootings in Paducah, Jonesboro, and Littleton. Schools should not hesitate to conduct parent meetings as a way of providing information for adults on how we help children the most. Many children and especially younger ones are greatly affected by how adults cope with the tragedy. The following suggestions will help the parent meeting to be effective in assisting the community.

- Hold the meeting as soon as possible after the crisis.
- Publicize the meeting throughout the community with letters of invitation sent to parents and announcements included in television, newspaper, and radio coverage.
- Open the meeting with a review of known and factual information provided by the school administrator and/or local police or prosecutor.
- Provide crowd control with organized parking, seating for all participants, air conditioning, etc.
- Deny media access to the meeting.
- Utilize audiovisual equipment and an effective public address system.
- Provide refreshments.
- Locate an effective speaker who is knowledgeable about crisis intervention, mental health, and schools.
- Recognize the uncertainty, the need to know why the tragedy occurred, and the accompanying anger, but *focus on what can be done now to assist all who are affected.*
- Outline specifically what children's reactions to crisis are and how adults can assist them.
- Encourage the reopening of school as quickly as possible.
- Discourage children from being interviewed by local and national media.
- Stress the commonality of what everyone is experiencing.
- Find the strengths of the community and outline plans for the next few days.

Questions to Estimate the Degree of Trauma After a Death

There are several questions that are useful in designing an appropriate intervention within a school system.

1. *Who was the deceased person?* The death of a popular or well-known member of the school community will have more impact than that of a new or little–known member.

2. *What happened to the deceased?* Unlike an extended illness during which individuals are able to prepare themselves for loss, murder and suicide are unexpected. This aspect makes them more difficult to deal with than a death that is protracted in nature.

3. *Where did the death occur?* Deaths that occur on school grounds are very unexpected and more difficult to deal with. School personnel and students may have actually witnessed the death, and local and national media will likely become involved.

4. *Have any previous occurrences affected the school?* The recent death may bring up unresolved issues from other crisis situations. Mental health professionals should inquire about any previous tragedies that may have affected a particular school and how and if the tragedies were resolved.

5. *Who was the perpetrator?* It is shocking when an acquaintance commits an act of violence, raising many unanswerable Why? questions and individuals questioning whether they might have acted to prevent the tragedy.

It often appears that school personnel underestimate the impact of deaths that occur in the community during holidays and vacation time. A principal questioned why a student suicide during spring break would have much impact on the school when classes resumed. Schools are often the only community environment where teens or adults gather to share the loss and confront emotional issues. One teacher commented in a crisis workshop that 2 days after high school graduation a student of hers lost three classmates owing to a car and train wreck. The student described how she and her surviving classmates met in the school parking lot each evening without any adult assistance, to try to help themselves cope with the loss. School psychologists must be assertive and seek out the grieving students even when school is not in session.

Deaths Due to Suicide

Dealing with suicide is particularly difficult. The American Association of Suicidology's (1998) very important postvention procedures recommend the following for schools :

1. Do not hold a large-scale school assembly or dedicate a memorial to the deceased.

2. Do provide individual and group counseling.
3. Verify the facts, and do treat the death as a suicide.
4. Contact the family of the deceased.
5. Emphasize that no one is to blame for the suicide.
6. Emphasize that help is available, that suicide is preventable, and that everyone has a role to play in prevention.
7. Encourage funerals to be scheduled during non-school hours.

The American Association of Suicidology can be contacted at www.suicidology.org.

Crisis Counseling

One important element in getting over a shock appears to be the opportunity to discuss the event and one's reactions to it (R. Pynoos, personal communication). Although this applies to both children and adults, especially the children should (optimally) be provided an opportunity to process the experience within 24–36 hours after the event (National Association of School Psychologists, 1992). Individuals need help understanding their emotional reactions and reassurance that what they are experiencing is normal. Some individuals become even further distressed since they fear they will "lose their minds" or "be unable to do what others expect of them." Most people benefit from being given time to articulate what they are feeling and thinking. Subsequently, it is beneficial for traumatized individuals to know what to expect (e.g., difficulty sleeping, reoccurring fears, episodes of panic) and how best to confront them.

A properly trained school counseling team is able to provide the necessary short-term support after many types of traumas. For situations involving large groups of students, formation of a community-wide support team is often necessary to manage the numbers of traumatized students, faculties, and parents. Such an experience is labeled a "group crisis intervention" or "debriefing" and specialists in this area are available (for training and intervention) through the National Organization for Victim Assistance (NOVA). Many school psychologists have been and continue to be trained on the NOVA model.

Many practical and age-appropriate strategies are available to assist children (Brooks & Seigel, 1996). However, another significant basic element in crisis counseling is that whenever possible interventions should begin with the faculty and parents. These two groups are in the best position to assist children. The more assistance faculty and parents receive after a jarring event, the greater their ability to help the children.

In addition to helping significant adults cope with their own emotional reactions, it is often useful to be reminded of normal childhood reactions to a disturbing event or loss. Children (and adults as well) should be allowed to discuss/express these emotions as they would discuss more typical emotions under more normal circumstances (Eth & Pynoos, 1985). It can be a temptation for adults to disallow repeated expressions of fears or emotional reactions from children, especially if the adults are attempting to cope with the aversive memories through denial or repression. Many of the typical childhood reactions are not commonly known or understood by many adults. These reactions include:

1. Fears of all sorts
2. Regression academically and behaviorally
3. Nightmares and sleeping difficulties
4. Need to be comforted, reassured or held frequently
5. Easily becoming tearful or angry
6. Over-reactions to small events

Meetings for both faculty and parents can provide an opportunity to outline in a practical manner what reactions to expect from children and how to assist them. Long after a crisis has occurred, individuals tend to continue to ask "*Why?*" and "*What could I have done to prevent it?*" There are no answers, and if these questions persist, then they usually prevent individuals from getting past grief months and years after the tragedy.

Traditional Approaches

Caplan (1964) also wrote about stages typically observed during an emotional breakdown due to personal crisis. Traditionally, crises have been regarded as unfolding in four stages. First there is an initial rise in tension due to the crisis event. Second, in the face of the continued impact of the stressing event, there is a lack of success in the usual problem-solving techniques. During the third stage other problem-solving resources are mobilized, and, following failure of these, tension mounts to the breaking point during the fourth and final phase of severe emotional disorganization (Caplan, 1964; Cohen, 1990).

Community counselors have long advocated crisis counseling, and several authors have written about useful counseling techniques during personal and community-level crises (Faberow & Gordon, 1981; Slaikeu, 1990). There are several different models in the literature. This sort of counseling intervention is specific to crisis. The goals of "psychological first aid" are unlike those of traditional therapies. Rather, they revolve around addressing immediate concerns and helping the distressed individual or "victim" sort out such needs as welfare, safety, shelter, and so on.

In the way of an overview, however, a traditional general approach emphasized by Slaikeu (1990) outlined the following principals of what he called "psychological first aid":

1. Make contact with the victim and give him or her permission to express thoughts and emotions.
2. Explore the problem in terms of the past, present, and future.
3. Identify possible solutions to assist the victim.
4. Take definite actions to assist the victim.
5. Provide follow-up assistance.

NOVA Model

The NOVA (National Organization for Victim Assistance, 1997) model for crisis intervention counseling was developed for community usage and has recently been utilized in educational settings, and has proven effective in the aftermath of school shootings. The model, which is very applicable to the classroom, first recommends that all desks be placed in a circle. One facilitator leads the discussion, and an appointed "scribe" records verbatim key phrases on an easel. The NOVA model suggests the following sequence:

1. Everyone is asked to remember where he or she was when they first became aware of the tragedy.
2. What were their sensory perceptions?
3. What were the accompanying thoughts and feelings?
4. What are they worried about in the near future?
5. What previously helped them when bad things occurred in their lives, and what or who has provided some comfort now?

The facilitator leads the discussion and stresses the commonality among group members in their responses to the above questions. Notes taken by the "scribe" are used to review important points. Based on the group's wishes, the notes are either destroyed or saved at the end of the session.

The model is intended to serve as a starting point in coping with a shocking event. Ongoing or long-term assistance can be delivered subsequently (to those in need) through a partnership or collaboration with community agencies, organizations, and practitioners. The NOVA model has much promise for schools especially with groups of children or adolescents that number fewer than 50 in size. The authors have found that it is difficult for each participant to hear every word spoken when more than 50 chairs are placed in a circle. More information about NOVA is available at www.try-nova.org. The school psychologist should utilize this model with a classroom or small group of traumatized students or staff.

Sanford Model

Developed by Nancy Sanford, The Sanford Model of Debriefing Critical Incident Stress holds much promise for schools especially with groups that have more than 50 people. The Sanford model serves the following purposes:

1. Provides victims the opportunity to sort out thoughts.

2. Identifies what is needed for safety.

3. Provides a guided mental health discussion that fits a 45-minute period.

4. Reduces isolation.

5. Creates empathetic bonds.

The Sanford model format outlined by Wong (2000) is very specific with one facilitator dividing the group into small groups of equal size with four to six participants in each group. Everyone is seated in a small circle with one person chosen to respond first to the four key questions. The following rules must be carefully explained to participants:

1. Everything said is confidential.

2. Each person takes a turn (clockwise).

3. One person speaks at a time and there is no cross talking.

4. Each person has a time limit (e.g., 1 minute) so that the facilitator can conduct this debriefing with large numbers of participants.

5. Group members' responsibilities are to listen and to remain silent if one member does not use the allotted time.

The four key questions that each group member answers in order are:

1. What is your name, and where were you when the tragedy occurred?

2. What was your first thought?

3. What was your worst feeling?

4. What would help you feel safer now?

The first author and Marleen Wong used this model very successfully with Jefferson County school personnel in the aftermath of the Columbine tragedy. School psychologists will find this model particularly helpful with the entire school faculty or with large numbers of high school students. One advantage to the model is that it can be completed during a classroom period or a faculty meeting owing to the defined time limit to respond to each question. One school psychologist can utilize this model with a large number of participants. During the group debriefing the school psychologist should move from group to group so that he or she can summarize important themes and cite the commonality among all in attendance at the conclusion of the debriefing.

NEAT Team

NASP created NEAT in the aftermath of the Oklahoma City bombing so that the organization could be more responsive to national level crises affecting schools (Feinberg, 1998; Zenere, 1998). The specific purposes of the six-member team are:

1. Promote training in crisis intervention.

2. Provide direct on-site assistance when requested at national level crises that affect children and schools.

3. Provide consultation to school officials and students and to school psychologists across the country who are faced with a tragedy either by telephone and through written materials.

4. Support state school psychology associations as they form state level crisis teams as have already been done in Florida and Georgia.

NEAT has formed partnerships with organizations such as NOVA, the American Red Cross, Federal Emergency Management Agency, and state emergency response teams. To contact NEAT, visit NASP's website (www.naspweb.org/NEAT). Specific future activities are to work with the International School Psychology Association to form an international network and foundation for crisis intervention.

Effects of National School Tragedies

Most children in America viewed the extensive and graphic television news coverage of shocking school shootings such as that at Columbine. Reactions to such events often appear to reverberate around the nation and the world. School officials should anticipate increases in feelings of fear for student safety in their school subsequent to such an event. Usually increases in written or verbal threats of violence, bomb threats, bringing weapons on campus, and rumors of copycat attempts also occur. Since the students are already aware of the developments, such incidents can present a "teachable moment" in that the students are more open to discussion about the incidents and are more open to constructive input from adults. If counselors and teachers have been prepared in advance, then such discussions could occur within the confines of the school day, with curriculum very easily being set aside, and students provided with a forum in which to discuss their personal reactions, thoughts, etc. What follows are key points:

1. Conduct faculty meetings to prepare for discussion of the tragedy with students.

2. Make sure discussions are focused on how to make schools safer rather than on glamorizing the perpetrators by mentioning their names and discussing their actions.

3. Assign school police, administrators, and teachers to visible points inside and outside the school where they will greet students and assure them of their safety.

4. Develop a violence prevention and school safety lesson to be utilized in every classroom.

5. Highlight (for both parents and students) prevention programs that are already in place. If there are no such programs, then a task force on school safety and violence prevention should be formed to develop these programs.

Each nationally publicized school shooting in America dramatically affects our children. Too many educators have insisted on sticking to the assigned curriculum when their students needed opportunities to discuss their fears. Many teachable moments to work on school safety and violence prevention have been missed. Students commented that they were told, for example, "The student who made the bomb threat has been expelled," and "There is nothing for you to worry about—get back to work." National news coverage of school violence cannot be simplified or minimized and will affect schools across the country. School psychologists are in a key position to advocate for students to not only have the opportunity to express their own fears but to create opportunities for students to become more involved in prevention activities.

SUMMARY

Major tragedies such as those that occurred in Jonesboro, Arkansas, or Littleton, Colorado, are, thankfully, very rare, but it is still very important that we seek out training in crisis intervention. More university training programs are now including course work in this area. Over the course of a career every school psychologist will encounter a number of deaths or serious injury to students or school faculty. Schools are also greatly affected by tragedies that occur in the surrounding community. Crisis plans can and should be designed to manage the three waves that descend on a school after a crisis, specifically police and medical, parents, and the media. Preventive school and community safety programs must be a central part of the planning.

The school psychologist can be an important member of a building-wide and district-wide crisis team. Throughout the crisis intervention process, school psychologists can make valuable contributions in a number of different areas: advocating for and implementing prevention (school safety) programs and planning for and overcoming traumatic events in schools. Furthermore, school psychologists often coordinate the tremendous support frequently needed during the aftermath of a crisis. Many school psychologists have even served as the school system media spokesman after a tragedy.

Is there opportunity in adversity? Owing to the tragic events of the past, it appears that many administrators are ready to create and improve crisis management plans. How ready are they to put preventive programs in place? Many schools are conducting important crisis drills as a means of establishing readiness, but in a few instances drills have been far too realistic with gunshots and simulated blood. School psychologists can advise administrators and police how to balance the need for preparation while taking care not to scare students. School psychologists are often trained in organizational and community intervention and are particularly oriented toward prevention. School safety can be an issue that unites communities and schools. The attention now directed toward violence in the schools provides school psychologists our opportunity to successfully advocate for prevention programs many of us have read about, discussed, and hoped for over the past few decades.

The American Psychological Association (1993) outlined the origins of youth violence: child abuse, ineffective parenting, violence in the home, media violence, poverty, prejudice, gun access, and substance abuse. School psychologists can advocate at the local, state, and national level for policies and programs that address these origins and specifically programs that prevent the leading causes of death for children, which are accidents, homicides, and suicide. The authors commented in previous editions of *Best Practices* that we hoped that our nation was on the road to safer schools. The recent tragic shootings in schoolyards across the country have made us all wonder what else can be done. There appear to be few if any legislated changes that address any of the origins of youth violence. The philosopher Dac commented, "The future is the past in preparation." School psychologists must learn from these tragic events, increase their skill base in the area of crisis intervention, and advocate for prevention programs.

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Canter, A. S., & Carroll, S. A. (Eds.) (1998) *Crisis Prevention and Response: A Collection of NASP Resources.* Bethesda, MD: National Association of School Psychologists.

The authors have compiled a variety of resources that are very useful to NASP members. Contained in this resource are handouts on a wide range of topics and emphasizing key intervention principles.

Dwyer, K., Osher, D., & Warger, C. (1998), *Early warning, timely response: A guide to safe schools.* Washington DC: U.S. Department of Education.

This is a guide developed in collaboration with the U.S. Department of Justice, the U.S. Department of Education, the Center for Effective Collaboration and Practice of the American Institutes for Research to help educators, parents, and community leaders prevent school violence. This guide provides schools with a foundation of principles for recognizing signs of trouble that can lead to violent or destructive behavior.

Dwyer, K., Osher, D., & Warger, C. (2000) *Safeguarding our children: An action guide.* Washington, DC: U.S. Department of Education.

Offers schools specific strategies and programs that have proven effective in getting children the help they need before they become disruptive, disrespectful, or hurtful to themselves or others. This new booklet affirms that teamwork among educators, mental health professionals, parents, students, and community groups and organizations is critical to preventing violent school tragedies. An underlying theme of the publication is the importance of every child being known well by at least one adult. An important balance must be found between responding to a child's early warning signs and doing harm by labeling or over-reacting.

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There are four very practical, reader friendly volumes including (a) Being Prepared-Before a Crisis, (b) Being Responsive-During a Crisis, (c) Being Diligent-Moving Beyond Crisis, and (d) Hands on Assistance-Tools for Educators. These volumes are useful and practical for principals, counselors, school psychologists, or teachers.

Poland, S., & McCormick, J. (1999) *Coping with Crisis: A resource for schools, parents, and communities.* Longmont, CO: Sopris West.

This comprehensive 460 page book provides step-by-step guidelines for developing both school and community crisis teams. Specific roles for crisis team members are outlined including prevention, intervention, and long-term follow-up assistance. The authors utilize case studies of school shootings in Paducah, Kentucky, and Jonesboro, Arkansas, to illustrate key intervention points. How to manage extensive media coverage is also outlined. Includes a section that discusses the role of parents and community agencies.

Poland, S., & McCormick, J. (2000) *Coping with Crisis: A quick reference guide.*Longmont, CO: Sopris West.

This book provides an excellent summary of all the key points included in the 1999 book to assist schools, communities, and parents not only to cope with crisis but also to organize crisis teams. This book contains many resources for additional information on school safety.

68 Best Practices in School Violence Prevention

Jim Larson
University of Wisconsin-Whitewater
Douglas C. Smith
University of Hawaii
Michael J. Furlong
University of California, Santa Barbara

OVERVIEW

When it comes to evaluating the safety of school campuses and the prevalence of violence-related behaviors at school sites, there are two fundamental truths. First, early pronouncements about schools being "battle zones" or experiencing an epidemic of violence are now generally acknowledged as being alarmist assertions that are not reflective of the day-to-day reality of America's schools. Second, no matter how infrequently it occurs, school violence rightly will always be a matter of concern to both educators and the public. *Phi Delta Kappa* regularly polls the public regarding its attitudes about schools and found that school safety and discipline matters have been the public's top concern about public education for several years (29% of the general public thought that safety matters were school's biggest concern compared to 8% of public school teachers (Langdon & Vesper, 2000)). Despite heightened public concern regarding school violence, recent empirical studies have generally found relatively low levels of risk for serious harm in school settings when compared to other social settings (Brooks, Schiraldi, & Ziedenberg, 2000; Hyman & Perone, 1998; Morrison, Furlong, & Morrison, 1994). Brooks et al. (2000), for example, reported that the odds of a student dying at school was 1 in 2 million during the 1998–1999 school year (which includes the deaths at Columbine high school). Despite this low relative risk level, 71% of the general public believed that a school shooting was "likely" to occur in their community (Brooks et al., 2000).

Against this backdrop of heightened concern about school violence, some investigations are now giving rise to questions about the perception that America's youth are more likely than ever to be prone to extreme violence. In a recent report, the U.S. Department of Justice (2000), in its *Juvenile Justice Bulletin*, presented evidence that dire predictions made in the early 1990s of an uncontrolled wave of predatory juvenile crime has not materialized. What then is the source of the public's concern about youth violence? In part it may be based on the sharp increase in juvenile violent crime arrests in the late 1980s and early 1990s and the high-profile shootings that have recently occurred on school campuses. These are indisputable and undesirable facts. However, the federal government has also conducted high-quality crime victimization surveys since 1973 that provide alternative conclusions. These self-report data indicate that, with the exception of the early 1990s, youth ages 10–17 have reported relatively stable levels of violent crime victimization (these data reflect the reality that not all crimes are reported and of those reported not all are prosecuted). The unexpected conclusion was that, "...despite a temporary increase (in the early 1990s), the rate of serious juvenile offending as of the mid-1990s was comparable to that of a generation ago" (U.S. Department of Justice, 2000, p. 2). Given these patterns of public opinion and empirical research, it is reasonable to conclude that the general public, policy makers, and even some educators and parents have incomplete information about the prevalence and actual risk potential of violence involving school-aged youth. It is also likely that public opinion is driven by a phenomenon known as the availability heuristic, wherein judgments (often erroneous) regarding events and outcomes are based on the availability of recent events in memory (i.e., believing that air travel is becoming unsafe after a recent crash).

Although the data do not support the belief that school violence is increasing, we do not minimize the fear or importance of focusing on violence in the schools. Indeed, with regard to the second truth, expectations that schools should be places of safety, security, and nurturance are fundamental to American educational principles. The desire to create schools that help children to flourish will always mean that attention should be given to evaluating and considering ways to ensure that students are not harmed when attending school or participating in school-sponsored events. Creating safe schools that are also conducive to learning is, in fact, one of America's primary educational objectives (National Education Goals Panel, 1999), and given its status as a fundamental educational goal, concerted efforts have been made in recent years to monitor the prevalence of school violence. We now turn our attention to a brief description of what these surveillance efforts have found.

PREVALENCE OF SCHOOL VIOLENCE

Heightened interest in school violence has motivated investigators to design better instruments to understand its prevalence and patterns. There are some excellent regional data available (e.g., Furlong, Morrison, Bates, & Chung, 1998; Cornell & Loper, 1998) but the Centers for Disease Control's *Youth Risk Behavior Surveillance Survey* (YRBS) (Brener, Simon, Krug, & Lowrey, 1999) is the most widely cited source of prevalence information about school violence-related behaviors and experiences. The YRBS is an epidemiological instrument designed to solicit self-report information from adolescents regarding their involvement in health-risk behaviors including violence-related behaviors and injury-related incidents on school campuses. The YRBS is administered to a random sample of students who are representative of the U.S. school-age population. The most comprehensive questions about school violence were included in the 1993, 1995, and 1997 surveys and provided high-quality estimates of the prevalence of school violence and related behaviors. Given the space limitations of this chapter, we have highlighted salient YRBS patterns and trends along with work by Stephens (2000) exemplifying the national prevalence of school violence in Table 1.

There are several notable trends in school violence-related behaviors. First, since 1992, the number of school-associated deaths (all deaths at school or at school-related events, including suicides and homicides committed by adults) has decreased by more than 50%. Second, fights and weapon possession at school have declined, and their prevalence is higher in the community than on school campuses. Third, males and younger high school students report higher rates of fights and weapon possession at school. Fourth, African-American and Hispanic students tend to report higher rates of weapon possession and fights than do European-American students. Finally, self-reported crime victimization at school does not vary by community urbanization, although urban-school students reported higher rates of gang presence on their campuses. School psychologists who are interested in a closer inspection of these trends will find that the website for the annual school safety report produced by the U.S. federal government provides a comprehensive compilation of school violence information (U.S. Department of Education and U.S. Department of Justice, 1999).

BASIC CONSIDERATIONS

School violence prevention as a meaningful component of every school psychologist's role and function begins with the development of the appropriate competencies. What is it that school psychologists need to "know and be able to do" to be effective in the delivery of these services? At the pre-service level, training content is guided by (a) survey feedback from practitioners, (b) the idiosyncratic preferences and expertise of individual university faculty members, and (c)

Table 1. Prevalence and trends of selected school-site violence-related behaviors and experiences

Violence-related behaviors	*Findings and trends*	*Comment*
School-associated violent deaths are declining (Stephens, 2000)	52.7% decrease from 1992 to 1993 (55 deaths) (first year data available) through 1998–1999 (26 deaths).	This includes suicides and all violence-related deaths on school campuses regardless of the day or time of act. A number of these acts involved adult-generated behaviors (e.g., spouse shooting their teacher-spouse on the school campus).
Physical fights on school property are declining (YRBS; Brener et al., 1999)	Physical fights on school property in past 12 months have declined by 8.6%; 1993: 16.2%; 1995: 15.5%; 1997: 14.8%.	Rates by gender, racial/ethnic identification, and grade level have all been stable or decreasing. Hispanics reported a 6.1% increase in physical fights at school from1993 to 1997.
Possession of any weapon on school property is declining (YRBS; Brener et al., 1999)	Any weapon possession in past 30 days has declined by 28.0%; 1993: 11.8%; 1995: 9.8%; 1997: 8.5%.	Rates by gender, racial/ethnic identification, and grade level have decreased. Weapon possession at school is down for black males (38.7% decrease) and white males (28.4% decrease).
Weapons are carried more often in the community than on school property (YRBS; Brener et al., 1999)	Weapons are carried 2.2 times more often in the community when compared with the school campus; carried in community, 18.3%; carried at school, 8.5%.	Weapon possession in the community and at school has declined steadily since1991. Youths are exposed to more violence-related behaviors and experiences in the community than at school.
Level of concern about school safety is low and stable (YRBS; Brener et al., 1999)	About 1 in 25 students report they stayed home in the previous 30 days because of safety concerns at school and/or going to/from school.	Research has shown that concern about safety at school is not prevalent (Furlong et al., 1997).
Males are most involved in school-associated violence (YRBS 1997 survey, Kaan et al., 1999)	Physical fight on school property in past 12 months: 20% males versus 8.6% females. Any weapon possession in past 30 days: 12.5% males versus 3.7% females.	School violence surveys have focused on overt physical behaviors and have not attended to patterns of behavior and aggression that might be more common among females (e.g., relational aggression).
Violent behaviors vary by grade level (YRBS 1997 survey; Kaan et al., 1999)	Physical fight on school property in past 12 months: ninth grade, 21.3%; tenth grade, 17.0%; eleventh grade, 12.5%; twelfth grade, 9.5%. Any weapon possession in past 30 days: ninth grade, 10.2%; tenth grade, 7.7%; eleventh grade, 9.4%; twelfth grade, 7.0%.	It is generally thought that violence-related behaviors decline with age because of the students' increased maturity and because high-risk youths are more likely to drop out, be expelled, or enroll in alternative school settings.

the mandates of state and national certification and accreditation bodies (Curtis & Batsche, 1991). Recent surveys have obtained information on school violence prevention as a continuing education and pre-service training need. When school violence was defined as "verbal taunting, bullying, sexual and ethnic harassment, gun possession, and more serious forms of physical assault," Olsen, Larson, and Busse (2000) found that, of 221 National Association of School Psychologists (NASP) members, 85% indicated that these issues had emerged as prevention/intervention needs in their districts. Comparatively, Furlong et al. (1996) found that 85.4% of school psychologists indicated that they had received no training in school violence and only 26.8% felt prepared to address the issues. Not surprisingly, the overwhelming percentage of school psychologists endorsed the need for pre-service and continuing education in the area of violence prevention and intervention (Furlong et al., 1996; Larson, 1993; Olsen et al., 2000). The perception of this need is apparently matched by institutions that train at the specialist level. In a survey of 90 school psychology programs, 72% of the respondents agreed or agreed with reservation on the need to provide discrete pre-service education in the area of school violence prevention and 49% indicated that it was already required course work (Larson & Busse, 1998).

NASP guides the content of accredited pre-service training through its *Standards for Training and Field Placement Programs in Psychology* (National Association of School Psychologists, 2000). These most recent standards provide improved latitude for training programs to integrate the necessary practice competencies in school violence prevention. It remains for program faculty to plan internally and work collaboratively with state licensing agencies so that the appropriate competencies can become a part of the general curriculum, although in some states, such as California, the state credentialing agency now mandates specific school safety training standards. Table 2 provides an example of possible school violence training competencies.

Whereas surveys indicate practitioners reported a sense of preparation inadequacy related to the delivery of service in the area of school violence prevention (e.g., Furlong et al., 1996), it can be argued that the gap between training and useful competence is narrower than it may appear. School psychologists, with their current problem-solving orientation and training in assessment, consultation, direct intervention, and program evaluation are well situated to

Table 2. Suggested pre-service training competencies

Domain of training	*Knowledge and practice competencies*
Data-based decision making and accountability	• Construction, implementation and interpretation of local needs assessments • Early screening for children at risk • Threat and suicide assessment • Functional assessment of aggressive behavior
Interpersonal communication, collaboration, and consultation	• Design and leadership skills on school safety collaborative teams
Effective instruction and development of cognitive/academic skills	• Methodologies for increasing academic engaged time to reduce disruptive behavior problems • Designing and monitoring effective alternative instructional settings for high risk students
Socialization and development of life competencies	• Understanding the development of aggressive antisocial behavior • Conflict resolution and social problem-solving methodologies • Small group and individual anger and aggression management skills training • Bully prevention methodologies
School and system structure, organization, and climate	• Organizational development and systems theory to facilitate development of safe schools policies
Prevention, crisis intervention, and mental health	• Primary, secondary, and tertiary prevention as applied to school violence • Violence-related crisis management, including victim support
Home/school/community collaboration	• Parent management training methodologies • Community coalition models for violence prevention
Research and program evaluation	• Evaluation of school violence prevention/intervention at system, school, group, and individual levels • Determining empirically supported prevention/ intervention programs

begin the process of assuming these service delivery obligations. What it means to "understand the issues associated with school violence" subsumes both an array of historically problematic concerns with which most school psychologists have training and skill as well as less familiar, more focused areas. For many practitioners, functional assessment of anger-related student aggression, needs assessment design, classroom/school-wide discipline procedures, and crisis management may be accustomed practice areas, whereas threat assessment and student profiling, primary and secondary prevention procedures, victim support, and school/community coalition building may be comparatively new ground. Although further content and process training in specific violence prevention skills may be needed, most practitioners should possess the baseline training that can be generalized to present needs. The following case example demonstrates the application of traditional professional skills to the implementation of school violence prevention efforts.

CASE EXAMPLE OF APPLYING TRADITIONAL PROFESSIONAL SKILLS TO PREVENT SCHOOL VIOLENCE

At the onset of the school shootings that occurred in the late 1990s and following a series of highly publicized local incidents, the school psychologists of a medium-sized ethnically diverse Midwestern community came together in the fall of the year 1997 to brainstorm possible service delivery options. Whereas each building in the district had or was developing a school safety plan, the school psychologists were concerned with the lack of data-based decision making that was going into the process. Consequently, a decision was made to design and complete a district needs assessment that would provide localized data to each building.

The first step in the initial phase of the project was to secure support from the district administration. A formal presentation, which included a rationale and the proposed procedure, was provided to middle-level program directors. Once support was secured at this level, a full presentation to the Board of Education was made. The Board subsequently adopted school safety as one of the numerous district goals, and the Office of School Psychologists was designated to accomplish the needs assessment.

A decision was made to survey all students in grades 5–12, all teachers and support staff, and a random number of parents, stratified by school. A literature review was completed, and sample survey items were gathered. The school psychologists met over the course of the first semester to refine the survey items. Pilot surveys were constructed, and review copies were sent to a random selection of administrators, teachers, and parents. The reviewers were requested to critique the scale and provide constructive suggestions. The student portion of the survey was a revision of an instrument used previously in a larger urban setting within the state. Specific survey items were modified as a result of feedback from the reviewers.

Surveys were mailed to the randomly selected parents from each school during the late spring. Survey questions were translated for both the Spanish-speaking and Southeast Asian parents who resided in the community. The district administration approved a negative consent procedure, and students, teachers, and support staff completed the survey during a designated 1-week period. Surveys of questionable validity (e.g., clearly patterned or negative response sets) were set aside. By using a popular statistical computer package, descriptive data were completed for each item specific to the parent, student, teacher, and support staff survey versions and localized by building.

By using these local data, the school psychologists were able to function as more effective consultants on their building school safety teams. Among other data, the survey results indicated that despite both national and local high profile school violence incidents, the overwhelming concern across responders was for dimensionally less violent safety issues, such as bullying and harassment. Guided by the survey, the school safety teams utilized a problem-solving framework that the school psychologists had developed to create action plans for each building. Along with facilitating this problem-solving process, the school psychologists helped the building personnel to understand the need for empirically validated prevention/ intervention programs and to design necessary program evaluation protocols (see Berg, Berg, Sutkiewicz, Koras, Schmal, & Larson, 1998).

BEST PRACTICES

Unlike more traditional, historically secure areas of professional practice, school violence prevention is still a comparatively fluid and newly emergent service delivery option. Whereas widespread needs for services at the district level have been identified among school psychologists, training programs differ widely in their efforts at pre-service preparation. Consequently, practitioners seeking to address school violence issues are best served by linking service delivery in this newer area to the more familiar and well-established framework of collaborative problem solving (see Table 3). The remainder of this chapter will emphasize that effective school violence prevention is really little more than the exercise of traditionally established skills—assessment, consultation, intervention, and program evaluation—into a more selective, problem-solving focus.

Step 1: Problem Identification

This initial step includes the two major tasks of creating an organizational structure and identifying needs and concerns through assessment. Central to the potential effectiveness of any school-based violence prevention effort is its strategic location within a conceptually sound organizational framework. Too often, well-meaning efforts are seen to be "floating," independent of a secure, research-supported rationale for implementation. Aggressive publishers hawk their wares, and nervous schools systems start adding "programs" to meet public concerns; that is, an anger management program here, a conflict resolution classroom curriculum there, and so on. Such patchwork efforts may have a certain degree of face validity and offer political cover for those who seek it, but seldom result in positive cost-benefit outcomes for the district or the children it serves (Webster, 1993; Wilson-Brewer, Cohen, O'Donnell, & Goodman, 1991). A critical and natural role for school psychologists, therefore, is to use their training in collaborative and organizational consultation to bring order and focus to this process.

There are three tiers of organization to consider: community, district, and building (see Table 4). There are no data attesting to the strength of beginning at one level over beginning at another, or to the impact of a building-level policy without district or community policies. There are, however, obvious political advantages of obtaining higher level support before embarking at the building level, not to mention possible financial advantages. Nonetheless, there are no hard and fast rules, and school psychol-

Table 3. Problem-solving process in school violence prevention planning

Step 1: Problem identification
- Gather data on current climate and perceptions of school safety from multiple sources and settings.
- Utilize needs assessment surveys, focus groups, and extant discipline and police records.

Step 2: Problem analysis
- Analyze data and communicate findings to stakeholders.
- Facilitate setting of priorities and goals based on data.
- Construct hypotheses to explain current problem(s).

Step 3: Problem response proposals
- Determine primary, secondary, and tertiary prevention responses based on data and empirical research.
- Match prevention strategies to budget and staff capacities for implementation.
- Determine staff training requirements and provide as necessary.
- Develop dimensional rubrics and benchmarks for goal attainment.

Step 4: Response implementation
- Devise evaluation and progress monitoring protocols.
- Implement prevention strategies with high treatment integrity.
- Monitor and adjust strategies for increased effectiveness.

Step 5: Evaluation of prevention strategies
- Monitor goal attainment benchmarks for authentic change.
- Assess social validity: How do the stakeholders perceive the prevention effort?
- Continue, adjust, or discontinue prevention effort.

ogists are advised to consider their own unique circumstances.

Guerra and Williams (1996) identified two primary approaches to organizing community violence prevention efforts: Top-Down Comprehensive Planning and Grassroots Neighborhood Mobilization. The Top-Down model involves the formation of a local task force or planning committee consisting of key community leaders (see Table 4.) The Grassroots model arises out of the concern of local citizens, and leadership emerges out of those efforts rather than from an existing hierarchy. Once formed from either approach, this group is charged with developing a comprehensive strategy to address youth violence through (a) mobilization of community involvement; (b) determining target groups from primary, secondary, and tertiary prevention perspective; (c) assessing current resources and programs; (d) fostering coordination of activities across agencies; and (e) including evaluation components (Guerra & Williams, 1996).

The second and third tiers of organization are at the school district and building levels, and it is here that school psychologists can emerge as a powerful influence in the process. Knoff (1995) addressed the need for school psychologists to understand strategic planning processes and organizational change and urged practitioners to proceed in a systematic, problem-solving fashion. However, in the atmosphere of citizen concern and crisis mentality that currently surrounds the issue of school violence, it is common for the prevention impetus to originate reactively as a hurriedly devised local school board mandate or "safe schools" strategic goal. Whereas this knee-jerk method is not ideal from a strategic planning perspective, such a top-down authorization does serve to create the first stage of the problem-solving process within which school psychologists can use their organizational consultation skills (e.g., Curtis & Stollar, 1996) to help the district develop and implement a systematic response. (Although the remainder of this section will focus on planning for violence prevention at the building level, the problem-solving process is equivalent at the district level.)

Table 4. **Three-tier school violence prevention organizational structure**

Community organization
- School district superintendent or designee
- School board representative
- Educational staff representative(s)
- Law enforcement
- Business community
- Clergy
- Medical community
- Mental health community
- Municipal government
- Juvenile justice
- Media
- Parents and students

School district task force
- School district superintendent or designee
- Grade level administrator representatives
- Instructional staff representatives
- Supportive services representative
- School security representative
- Classified staff representative
- Parent representatives
- Student representatives

Building-level school safety planning team
- Principal or vice-principal
- Grade level/disability teacher representatives
- Support services representatives
- Students (age appropriate)
- Parents
- Classified staff representative

In the organizational phase of this step, the school psychologist uses his or her skills in team building and collaborative consultation to create a building School Safety Planning Team (SSPT; Table 4). The SSPT can be formed out of an existing group, such as a school crisis team, and should have wide representation and strong vocal administrative support. This team is charged with moving beyond crisis readiness and response to broad-scale planning for the full range of psychological and physical safety concerns. Importantly, this team must look beyond media-fueled fears about armed intruders and concentrate its efforts on the site-specific needs across the spectrum of safety for all of the students and staff in their building. Prevention planning exclusively focused to offset the potential for a multiple homicide is quite different from planning designed to address imminently more likely events.

The initial task for the SSPT involves defining the problem, and school psychologists can apply skills in data-based assessment to assist in the design and analysis of a comprehensive needs assessment. The results will generate important information from which to begin planning as well as provide a pre-intervention baseline to assist in ongoing program evaluation. School violence prevalence studies have utility for forming broad national and regional public policy, but are not as helpful when it comes to helping a specific district or school to evaluate the most pressing needs on *their* school campuses. To plan and implement a school violence prevention program effectively, each school needs to conduct an assessment that is tailored to specific needs of the problem-solving approach. A fundamental requisite of effective problem solving is to clearly identify the client or the primary unit of intervention. As far as school violence is concerned, the overwhelming focus has tended to be on individual students and efforts to reduce their proneness to violence. It is our view, however, that comprehensive school violence prevention programs should include components that examine individual (i.e., student), specific strategies, classroom, and campus-wide influences.

Information should be gathered that can be used for assessing school-wide trends in violence-related behaviors. Such information is initially sought for needs assessment purposes and later provides feedback about the patterns, trends, and correlates of violence-related behaviors. The traditional mechanism used to gather this type of information is self-report surveys of either or both students and staff. Discipline data and assessing the campus settings where reported violence occurs can be useful to augment the validity of self-report data. From a problem-solving perspective, contextual information is important to gather because strategies to prevent or inhibit violent behavior on campus may include modification of setting variables such as the school's physical plant and supervision patterns. Table 5 shows specific instruments and resources that are readily available and can be used as part of an environmental assessment procedure. However, the planning team may prefer instead to develop its own instrument for needs assessment, and school psychologists can provide valuable consultation on assessment domains and item construction.

Understanding the dynamics of school violence also requires obtaining information about how consistently school-wide behavior management and disciplinary practices are being followed. A problem-solving approach to violence prevention will also seek to understand the manner in which student behavior is being reinforced and consequented in the classroom. Strategies developed as part of the problem-solving process may often include elements to change naturally occurring reinforcement patterns.

Table 5. Instruments for assessing the prevalence of school-site violence-related behaviors for needs assessments and program evaluations

Instrument	*Description*	*Source*
Youth Risk Behavior Surveillance Survey	• Used in biennial national, state, and city surveys since 1991. Limited school violence items, but broad coverage of related risk behaviors.	• Centers for Disease Control Brener et al. (1999) (www.cdcp.org). Public domain, no cost.
California Healthy Kids Survey	• Modules provide in-depth coverage of each area, including a safe school module. Includes a detailed resilience module.	• California Department of Education and WestEd (www.wested.org/hks). Questionnaires by module are available at the web site.
California School Climate and Safety Survey	• Includes 102 items assessing school climate and victimization at school. Elementary and secondary versions.	• University of California Santa Barbara (see Furlong et al., 1997) www.education.ucsb.edu/~schpsych).
Multidimensional School Anger Inventory	• 36-item instrument that assesses anger, hostility, and aggression in school context.	• Smith et al. (1998) and Furlong and Smith (1998).
Problem Behavior Frequency Scale	• Compilation of items from surveys such as the YRBS. Inquires about 26 problem behaviors related to drug use, delinquency, and aggression.	• Virginia Commonwealth University Farrell et al. (2000).
Approaches to Assessing Violence Among Youth	• In-depth description of instruments for violence-related behaviors and attitudes. Includes reviews of teacher, parent, and peer instruments.	• Hamilton Fish Institute, George Washington University (www.hamfish.org) (Minogue, Kingery, & Murphy, 1999).

Step 2: Problem Analysis

Data from all sources are analyzed in this step, and the results shared with faculty, students, and the community. An important task for the SSPT is to communicate the results in a manner so that all of the stakeholders understand the problem in the most useful and effective fashion. School psychologists can assume leadership in this area by (a) assisting all parties to understand issues associated with the validity and reliability of surveys and other forms of gathered data, (b) developing data-based conclusions from the information gathered, and (c) ensuring communication of the findings to students and other stakeholders in a developmentally and linguistically sensitive manner.

The task of the SSPT turns now to building a prevention plan based on the knowledge acquired through the needs assessment process. The development of hypotheses linked to the identified problems and concerns is a critical next step, and school psychologists should find this very similar to generating hypotheses for individually based assessment (e.g., Batsche & Knoff, 1995). Looking to the data, the team develops hypotheses or hunches that attempt to explain problems in operational terms. In the previous case example, the problem analysis process revealed that the locale with the highest percentage of victimization was the outside grounds during lunch periods. In addition, poorly trained supervision or an excessively high pupil-to-staff ratio was thought to be a factor contributing to this problem. The collection of needs assessment data led to a useful hypothesis because it was linked to data and offered directions for intervention that could be evaluated.

The final phase of this step involves setting priorities and outcome goals. Limited budgets, competing internal interests, vocal media, and other outside influences can all contribute to the need to approach this task with care and reason. If the school psychologist is not appropriately trained, then it may be helpful to work with an outside facilitator from a local university or consulting group to guide the stakeholders toward consensus and prepare them to take the next step of selecting desired prevention strategies.

Step 3: Problem Response Proposals

The collaborative consultation skills of the school psychologist continue in this step as the SSPT members consider options regarding how the building should address the identified needs. School psychologists can take steps to ensure that a systematic process of consensus-building around an integrated, multisystemic plan is followed as the team examines effective response options. A format such as the one exemplified in Table 6 can aid in this process.

Adapting a public health model, prevention and intervention strategies directed toward reducing violent and antisocial behavior in school settings can be loosely grouped into *primary*, *secondary*, and *tertiary* strategies. At the primary prevention level, *universal* interventions are concerned with providing students with information, strategies, and coping responses designed to prevent the occurrence of negative antisocial behaviors. Usually these programs target the general school audience or groups of students who have not yet manifested problem behaviors. At the secondary prevention level, *selected* intervention programs generally target students who are considered at-risk for violent behavior on the basis of social, familial, academic, or personal characteristics. Frequently, those students considered appropriate for secondary prevention programs have been identified on the basis of emerging patterns of low-level antisocial behavior in school settings. Finally, at the tertiary prevention level, *indicated* programs target students who are already manifesting significant problems in interacting appropriately with others or who have an established history of violent behavior.

Furlong, Pavelski, and Saxton (in press) provide a useful schemata for conceptualizing school-based violence prevention and intervention efforts based on the specific needs of students with regard to their degree of connectedness to the current school milieu. For the majority of students who are reasonably involved in school activities and view school as a positive social and learning experience, the primary task is to *reaffirm* or reinforce their already solid connections. Most primary violence prevention strategies are oriented toward reaffirming students' overall sense of connectedness to school and fostering more positive interpersonal relationships. Often, this goal is accomplished through the development of prosocial and positive coping skills. At a more intense level of need, some students require prevention and intervention services aimed toward helping them *reconnect* or strengthen weakened connections with school. Although those students may be peripherally involved in school, they

Table 6. School violence prevention framework: Sample

	Academic climate	*Primary prevention*	*Secondary prevention*	*Tertiary prevention*	*School discipline*	*Crisis/ security*
Vision or desired outcome	All teachers understand and practice academic engaged time principles.	"Second Step" is taught in all K–5 classrooms within 3 years.	All children are screened for high risk behaviors at school entry.	A wraparound team of school, community, and parents is established.	A Code of Conduct is collaboratively written and taught in all classes.	All staff have been trained in "early warning" behaviors.
Essential questions	Who will provide training? Can we get released time?	What is the training requirement? Is board funding available?	What instruments or procedures have been validated?	Who are the most important members?	What models are currently available?	Can NASP provide training or materials?
Activity: What needs to be done and who will do it?	Contact the university for references and consultation: Mr. Lee.	Call publisher for information: Mrs. Ortega.	Do internet search and contact local university: Ms. Tate.	Contact juvenile justice and mental health association: Mr. Mitchell.	Visit Kohl Elementary and gather facts: Ms. Kwan.	Contact NASP: Dr. Williams.
Evaluation	Current status data are gathered and evaluation design is selected.	Same	Same	Same	Same	Same

Note. Programs, procedures, and names are examples only.

exhibit characteristics and dispositions that place them at-risk for involvement in antisocial behavior. This category of need roughly corresponds to a secondary level of prevention. In addition to the need to acquire prosocial and positive coping skills, those students may benefit from interventions designed to reduce problematic behaviors and to manage negative emotions such as anger and frustration. A third group of students is largely disengaged from school and likely to have a lengthy history of aggressive and violent behavior. In those cases, the task is to *reconstruct* or, in some cases, initially construct positive relationships with school. Such students require more intensive intervention services to rebuild their very precarious connections with school. Those students require comprehensive and multifaceted strategies to reduce their incidence of antisocial behavior, challenge self-defeating attitudes and cognitions, and establish more positive connections with school, home, and community.

School violence prevention and intervention efforts, when viewed from the perspective of the diverse student needs hypothesized by Furlong et al. (in press) must necessarily be multifaceted and complex. Given the multiple pathways through which violent behavior at school may develop, it is also important to consider ecological factors such as family, community, cultural, and other factors that exist outside the school setting. When faced with the difficult task of designing a comprehensive approach to address violence, how do school psychologists choose from among the wide range of alternatives available to them? In part, the decision must be based on both practical and empirical considerations. In the next section we review evidence for best practices for school-based prevention and intervention efforts with specific attention to those strategies that have thus far received the most empirical support.

BEST PRACTICES: PRIMARY PREVENTION

Primary prevention encompasses a host of efforts designed to intervene in a proactive manner with all students to head off the onset of negative developmental outcomes. Strategies may include universal screening of all children for behavioral risk status, education about diversity or alternative conflict resolution procedures, classroom instruction in problem-solving or self-control skills, or the modification of the environment to provide increased security. Walker et al. (1996) pointed that out that as part of a required universal prevention component, every school should have (a) a well-conceived school-wide discipline plan and (b) research-based effective schooling and teaching. School psychologists are aware of the importance of bonding, academic engagement, and increased self-discipline in the general adjustment of children in the school setting. The relationship of those factors to the prevention of school violence cannot be overstated.

One of the most common and potentially serious problems affecting the general school climate is that of bullying, and school psychologists who desire to initiate a primary prevention program are well-served to begin with this issue. Bullying has emerged as a concern not only in schools in the United States but worldwide (Limber & Nation, 1998). As a violence prevention strategy, efforts to curtail bullying most often involve school-wide policies and procedures as well as specific interventions targeting identified bullies and their victims. The primary objective of those programs is to create a school climate of tolerance and respect and to promote positive social interactions among students and adults at school. As defined by Olweus (1993), bullying involves intentional infliction of injury or discomfort on another person that occurs repeatedly over long periods and in which the victim is clearly weaker than the perpetrator. By using this fairly strict criteria, roughly 5–15% of students in U.S. schools are victims of bullying by other students. Boys are more often involved in physical attacks, both as bullies and as victims, whereas girls more typically engage in relational forms of bullying such as social isolation and rumor mongering (Whitney & Smith, 1993).

A best practices approach for bully prevention and intervention must necessarily involve a systems-wide approach that includes the bully, the victim, the school, the family, and the community. At the school level, efforts should include the development of a school-wide code of conduct with clear expectations for what constitutes appropriate and inappropriate social behavior. Batsche (1997) emphasized that students should play a major role in establishing such a code. Additionally, the school should make every effort to establish a climate of respect and mutuality extending from administrators to teachers to students. Such an atmosphere might be reflective of the school's mission statement and can be reinforced through appreciation and recognition of prosocial behaviors. At the family level, parents and their children can be invited to join the school in encouraging a low level of tolerance for bullying behavior. Parent participation in school-sponsored workshops, trainings, and discussion groups can be an important tool for gaining consensus about expectations for appropriate social behavior. Such parent-school partnerships can extend to the community as well.

As members of the SSPT, school psychologists should continue their efforts to encourage school support of empirically based programs and procedures. Whereas innovation and development is ongoing in the area of school-based primary prevention, five programs that have undergone evaluation and merit special attention are: (a) Bully Prevention Program (Olweus, 1993), (b) PeaceBuilders Program (see Embry et al., 1996), (c) Providing Alternative Thinking Strategies (see Greenberg & Kusche, 1998), (d) Resolving Conflict Creatively Program (see Aber et al., 1998), and (e) Second Step Violence Prevention Curriculum (see Grossman et al., 1997). Each of those programs uses teacher-presented curricula along with additional supports to create change in the manner in which all children resolve interpersonal conflict. Addressing needs at the primary/universal level may begin with an examination of the particulars of those five programs to determine if there is a match with the unique needs of the school.

BEST PRACTICES: SECONDARY PREVENTION

Secondary prevention efforts utilize selected interventions to target those students who have been identified as having multiple risk factors for possible later aggressive or anti-social behavior. Early childhood aggression and peer rejection are both comparatively stable and well-correlated with later antisocial behavior, so risk identification does not necessarily have to be a complex undertaking. Whereas multiple-gate screening and identification procedures are available and useful, school psychologists may find that a veteran teacher can be an invaluable source of highly reliable data in this regard.

Prevention efforts at the secondary/selected level typically involve behavioral self-control skills training in a group or individual format. School psychologists have the requisite training and skills to take the lead in organizing, implementing, and evaluating those programs. What are the essential elements of such efforts? Which students are most likely to benefit from what kinds of treatment? How might those programs be delivered? What is the optimal time frame? What steps must be undertaken to ensure maintenance and generalization of trained skills?

A recent review and meta-analysis of anger management programs for youth by Smith, Larson, DeBaryshe, and Salzman (2000) provides some direction for school psychologists considering such interventions. Although not all programs reviewed were school-based, a major conclusion was that anger management, as a general treatment strategy, is highly effective in reducing antisocial behaviors across several contexts. This conclusion is consistent with the findings of Derzon and Wilson (1999)who identified self-control techniques as among the most promising strategies for modifying students' physical and verbal aggression. In addition to supporting the overall efficacy of such programs, Smith et al. (2000) found that the most effective methods were multi-component interventions that include training in affective self-awareness and regulation, problem solving, and development of alternative means for expressing angry feelings. Those programs that included a strong cognitive component (e.g., problem solving, attribution retraining), appeared especially promising. Given the long-term stability of aggressive and antisocial behaviors, those programs that target younger children and include specific strategies to ensure maintenance and generalization are more likely to demonstrate lasting effects. Additionally, effective interventions should be relevant to a diverse group of students who differ according to such characteristics as gender and ethnicity as well as specific treatment needs.

As always, school psychologists should ensure that the selected skills training program has a strong empirical foundation; however, few well-validated programs exist. Given both the need and the importance of behavioral skills training, the lack of a variety of research-supported programs is disconcerting. Three programs, however, deserve attention and review by practitioners seeking to develop skills training within a multi-component prevention plan: (a) *Anger Coping Program* is a small group 18-session pull-out program for elementary-age students (see Lochman, Dunn, & Klimes-Dougan, 1993), (b) *Positive Adolescent Choices Training* is a culturally sensitive pull-out group for high risk African-American and other adolescents (see Yung & Hammond, 1998), and (c) *First Step to Success* is a promising program that addresses the emerging antisocial behavior of children just entering school in their kindergarten year (see Walker et al.,1996). The *First Step* program involves (a) a universal screening system to identify high-risk children, (b) a classroom-based intervention to teach adaptive behavior and foster effective school relationships, and (c) a parent training component.

BEST PRACTICES IN TERTIARY PREVENTION

In many schools there are students whose behavioral and emotional disabilities are so pronounced that it is often all the school can do day-to-day just to keep the problem from worsening. Those students frequently are beneficiaries of a variety of services in and out of the school setting in what has come to be called a "wraparound" organizational structure. Multiple supports and services are "wrapped around" the student and, in many cases, the family in an effort to prevent problems from advancing to a more serious level. At the tertiary level, prevention goals are principally a matter of maintaining current functioning strengths, with hopes for significant improvement of self-restraint skills. When explosive anger and aggression are predictable components of the student's behavior, then the SSPT is well advised to develop and monitor an intervention plan. Among the questions to be resolved by the team include:

1. Is there an existing IEP or other behavioral plan and how will the prevention plan interface?

2. Has a functional behavioral assessment been completed, analyzed, and the conclusion shared with appropriate individuals?

3. Is there a need for staff training, including the possibility of de-escalation techniques and restraint/transportation procedures?

4. Is the discipline plan designed to be proactive and educational and not purely reactive and punitive?

5. Is there a need for an alternative educational placement?

Best practices in this step call for comprehensive programs that involve schools, students, their families, and communities. Direct intervention programs should target self-control and regulation and should build social competence, particularly the ability to effectively resolve interpersonal conflict in nonaggressive and prosocial ways. Interventions should occur early, should draw upon developmental theory, and should be presented in culturally appropriate ways. School psychologists have a unique opportunity to use existing skills in consultation, coordination, and provision of direct services at primary, secondary, and tertiary prevention levels.

Step 4: Response Implementation

Whether through consultation or in direct treatment, school psychologists have long recognized the importance of treatment integrity in their work with pupils. In a similar manner, well-conceived, well-designed, but poorly implemented interventions can have disastrous effects on a school violence prevention effort. As teachers and other supportive services staff take on treatment-like roles and responsibilities, it becomes incumbent upon school psychologists to help these individuals to better understand the importance of treatment integrity.

A violence prevention curriculum that has shown promise when provided on a weekly basis is compromised when it is continually set aside in favor of some other "more pressing" curricular need. An anger management program with strong empirical support for an 18-session weekly agenda cannot be reduced to 12 sessions for the convenience of the school calendar with the expectation that anticipated skills will be observed. School psychologists can help support their colleagues in this area by (a) ensuring that the appropriate level of staff training and development has occurred prior to implementation, (b) providing a mini-inservice on the importance of treatment integrity, (c) offering assistance at the implementation level where possible, and/or (d) monitoring the treatment and providing feedback to the principal staff member(s).

The beginning of this step is the opportune time for treatment evaluation protocols to be designed. As data-based decision makers, school psychologists recognize the need to find empirical support for the effectiveness of any school-based program. As protocols for this undertaking are considered, it is important that formative and summative data from both quantitative and qualitative sources be considered. Whereas a complete discussion of the processes involved is beyond the scope of this chapter, three useful resources that school psychologists may have on hand include Bennett (1988), Illback, Zins, and Maher (1999), and Steege (this volume).

Step 5: Evaluation of Prevention Strategies

Ed Koch, when he was mayor of New York City, was fond of asking crowds at every gathering, "So, how am I doing?" Any school psychologist standing by probably replied, "Let's see your data!" Most school psychologists are aware of programs in their districts that "look good" or are otherwise received positively by the stakeholders, but for which there is no evidence that demonstrable positive change is occurring. It is no less so in violence prevention than in other aspects of service .delivery that decisions about maintaining, modifying, or discontinuing programs or procedures need to be linked to the continual analysis of acquired data. Occasionally, this can be a politically or socially difficult task, especially when entrenched or popular programs are called on to show authentic outcomes, but answer they must. Few schools would continue a reading curriculum that failed to teach the skill; the same must be true for any aspect of the school violence prevention effort. The time is too short, the resources too limited, and the stakes are too high.

The evaluation protocols designed in the previous response implementation step carry over to this step and guide the SSPT as they monitor the plan. Moreover, seasoned practitioners know that school years tend to flow in "rhythms" of antecedent conditions; that is influences on behavior in April may be qualitatively different than those in December. Consequently, SSPT data analysis should take into consideration data from similar time periods in the previous year. Are the office discipline referrals lower than the similar period last year? Are the number of playground fights fewer than last year? Do the students self-report increased feelings of safety compared to a similar self-report in the previous year?

SUMMARY

The emergence of school psychology as a major force in national policy, research, program development, and service delivery in the area of school violence prevention has been one of the most significant and rapid changes in the profession over the past number of years. Isolated high-profile violence in the schools has caused educational staff in general and school psychology practitioners in particular to struggle with understanding myriad theoretical explanations and has forced them to wade through countless articles, books, conference presentations, and ubiquitous television specials and media hyperbole. Information, official policy, school board rules, and research on "what to do" have come forth at an almost dizzying pace.

School violence prevention involves understanding the multi-systemic pathways that influence the development and maintenance of violent behavior and applying effective prevention strategies. It involves a recognition that single-method approaches that, for instance, hypothesize and target within-child deficits or seek only to prevent a multiple homicide are inadequate. It involves instead a recognition that empirically based, multi-component, multi-level approaches rigorously applied and longitudinally maintained stand the best chances for success. And finally, it involves a sobering understanding that there is little a school can do to completely ensure that a committed individual will not be able to carry out his or her own plan of homicidal violence, yet a heartening realization that the likelihood is statistically very remote.

In this chapter we have attempted to frame the issue of violence prevention in a manner consistent with what practitioners are currently trained to "know and be able to do." At the core are the skills of data-based decision making and collaborative consultation, competencies that allow school psychologists to more accurately assess the needs of the school and to guide their colleagues through the use of a framework of empirically based decisions and research-supported interventions. We have emphasized that violence prevention activities need to be coordinated by a school-based team that possesses a clear understanding of the levels of prevention and can integrate the approaches to meet the needs of all students.

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WEBSITES

The Internet has quickly become a major source of useful information and research on school violence prevention. The NASP website (http://www.nasponline.org) and the National School Safety Center website (http://www.nssc1.org) are excellent starting points for links to additional practitioner-friendly sites.

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Best Practices in Developing Local Norms in Behavioral Assessment

Andrea S. Canter, Matthew Y. Lau, and
Allison House
Minneapolis Public Schools

OVERVIEW

The use of local norms in the assessment of academic skills has received considerable attention in recent years, particularly in the professional literature regarding Curriculum-Based Measurement (e.g., Shinn, 1989). This chapter addresses the application of local norms to behavioral assessment, particularly at the school and district level. This overview will be followed by a discussion of basic considerations in the development of locally normed procedures and recommended practices. The chapter concludes with the presentation of three case studies: (a) the development of a locally normed functional skills assessment procedure at the district and state level, (b) the development and normative application of a behavior screening procedure at the district level, and (c) the application of a district behavior screening procedure to norms development at the school level.

For over a century, the practice of assessment in school psychology has been largely characterized by nationally normed procedures used to diagnose and classify intellectual, academic, and behavioral problems. In recent years, researchers and practitioners have implemented significant alternatives to traditional approaches for measuring academic skills, such as Curriculum-Based Assessment and Curriculum-Based Measurement. This new generation of direct assessment procedures is more strongly linked to intervention than to classification, more relevant to instruction than to diagnosis, and more tied to local than to national standards of performance. Further, these procedures offer much promise in reducing ethnic and linguistic bias in assessment outcomes.

While the call to replace traditional approaches with alternative models has been the source of much controversy in the profession (e.g., Braden & Reschly, 1993; Fagan & Wise, 2000), the development of direct and ecological assessment procedures has unquestionably resulted in improved professional practice linked to students' academic outcomes (Reschly, Tilly, & Grimes, 1999). The shortcomings of traditional assessment are certainly as evident in the domains of social and adaptive behavior as in the domains of cognition and achievement: Student performance is compared to statistical national norms regardless of relevance to local cultural norms and home/school expectations and without a direct link to intervention (Reschly & Tilly, 1999; Gresham, 1999).

A Rationale for Local Norms

One alternative approach to traditional assessments is the use of local, rather than national, norms. Local norms have been cited as essential to developing instructionally and ecologically relevant assessments (Bardon, 1988) and as consistent with the concept of "Least Restrictive Environment" and outcomes-driven, problem-solving models (Shinn, Good, & Parker, 1999). Locally normed measures provide a means of overcoming some of the criticisms of traditional procedures, because they can address social standards and environmental contexts, lead to intervention, and reduce ethnic and cultural bias.

Even within the context of traditional assessment purposes of diagnosis and classification, the use of a local frame of reference is essential in addressing functional and social skills that are typically defined in terms of social significance or social validity. Gresham (1983) defines social skills as "situationally specific behaviors that predict important social outcomes for children and youth." Deno (1989) notes the importance of situational specificity in understanding the concept of disability: "Handicaps can only be defined in terms of the relationship between what a person can do and what a person must do to succeed in a given environment . . .. Teachers do not make judgments . . . based only on the universal norms of the culture; instead, their judgments are also based on the behavior of the students in classrooms and schools within which they are working" (pp. 5, 10). To best understand the student's functioning, one must consider the social norms or expectations of the classroom, school, and community in which the student is asked to perform. By addressing an important component of social validity—normative expectations of specific instructional settings—local norms can provide an essen tial contextual perspective to the special education eligibility and placement process (Gresham, 1999).

Local Norms, Expectations, and Intervention

The concept of social validity is closely tied to local expectations or the standards of one's community, culture, neighborhood, school, or peer group. National norms provide information about the individual's functioning relative to what are assumed to be universal standards. Yet, in a diverse society, such assumptions can lead to cultural and regional bias in measurement, one of the strongest criticisms of norm-referenced testing.

Locally developed norms, on the other hand, should reflect what is relevant for success within the local context. Procedures reflecting local standards should more fairly identify individuals in need of intervention in order to perform successfully. Such measures directly relate to referral concerns since teacher referrals likely reflect a discrepancy between student performance and teacher expectationor their perception of "teachability" rather than an absolute deficit in skills (e.g., Gresham, 1999). Furthermore, congruence with teacher expectations for classroom functioning is highly related to mainstream success for at-risk students and those with disabilities (Hersh & Walker, 1983).

Assessment approaches reflecting local standards are more readily applied to designing intervention strategies than are global, nationally normed procedures. Such procedures allow comparison of a referred student with relevant peer groups, facilitating informed decisions regarding (a) the most appropriate and least restrictive placement, (b) the degree of discrepancy between the student's behavior and the expectations of a potential placement, and (c) areas requiring intervention prior to transition to a less restrictive or mainstream placement. These characteristics are consistent with the concept of "template matching" described by Hoier, McConnell, and Pallay (1987), in which assessment information is used to develop a "template" (behavioral profile) of individual classrooms to promote successful transitions from special to regular education classrooms (McConnell, 1987; Horn & Fuchs, 1987). Such applications of local norms help fulfill a critical component of problem-solving models; that is, defining "the degree of discrepancy between the demands of the educational setting and the learner's performance" (Tilly, Reschly, & Grimes, 1999, p. 304).

Importance to School Psychology Practice

School psychologists are generally trained to serve as problem solvers, yet traditional practice tends to emphasize problem identification. School psychologists seeking expanded roles should find that the implementation of locally normed assessment procedures enhances opportunities for problem-solving consultation by directly addressing teacher expectations and referral concerns. By offering alternative or supplemental information that can be interpreted in the local cultural context, local norms also can help alleviate ethical dilemmas created by the potentially discriminatory nature of nationally normed procedures. Furthermore, the design and development of locally normed procedures provides an ideal opportunity for school psychologists to use their training and expertise in measurement and applied research within the practical scope of a single classroom, school, or district.

Limitations of Local Norms

Use of local norms is hardly a cure for all problems associated with traditional measures. Many of the criticisms of nationally normed tests apply to local norms as well. A norm-referenced measure of any sort may not fit the assessment purpose; even a locally normed procedure may not fairly represent a given individual. Technical adequacy also can be a significant problem with locally normed procedures when samples are small. If the behaviors measured vary significantly across settings, then it may be difficult to identify sufficiently consistent environments from which to draw an adequate sample for norming purposes. Furthermore, when data reflect local values and/or local samples, one cannot generalize with much confidence beyond the immediate context.

BASIC CONSIDERATIONS

To effectively design and implement a locally based assessment model, the school psychologist must consider a number of factors, including (a) the purpose of the assessment procedure(s), (b) the "measurement net" or domain(s) of the assessment, (c) the definition and characteristics of the local population, (d) the format of the assessment, (e) data collection procedures, including standardization and psychometric properties, (f) the availability of administrative and technical support for the design and implementation of the procedure, and (g) implementation issues. These factors are addressed sequentially, as presented in Figure 1.

Purpose of Assessment

Before embarking on the development of a locally normed assessment procedure, school psychologists should determine the reasons why the measure is needed and the level of inference to be made from the data. In designing the measure, educators need to consider:

1. What referral concerns/school problems will the measure address?
2. What types of educational decision (eligibility, placement, instructional strategies) will be made?
3. What level of decision making is desired (e.g., screening versus diagnosis)?
4. Is a new tool needed or just local norming of an existing measure?

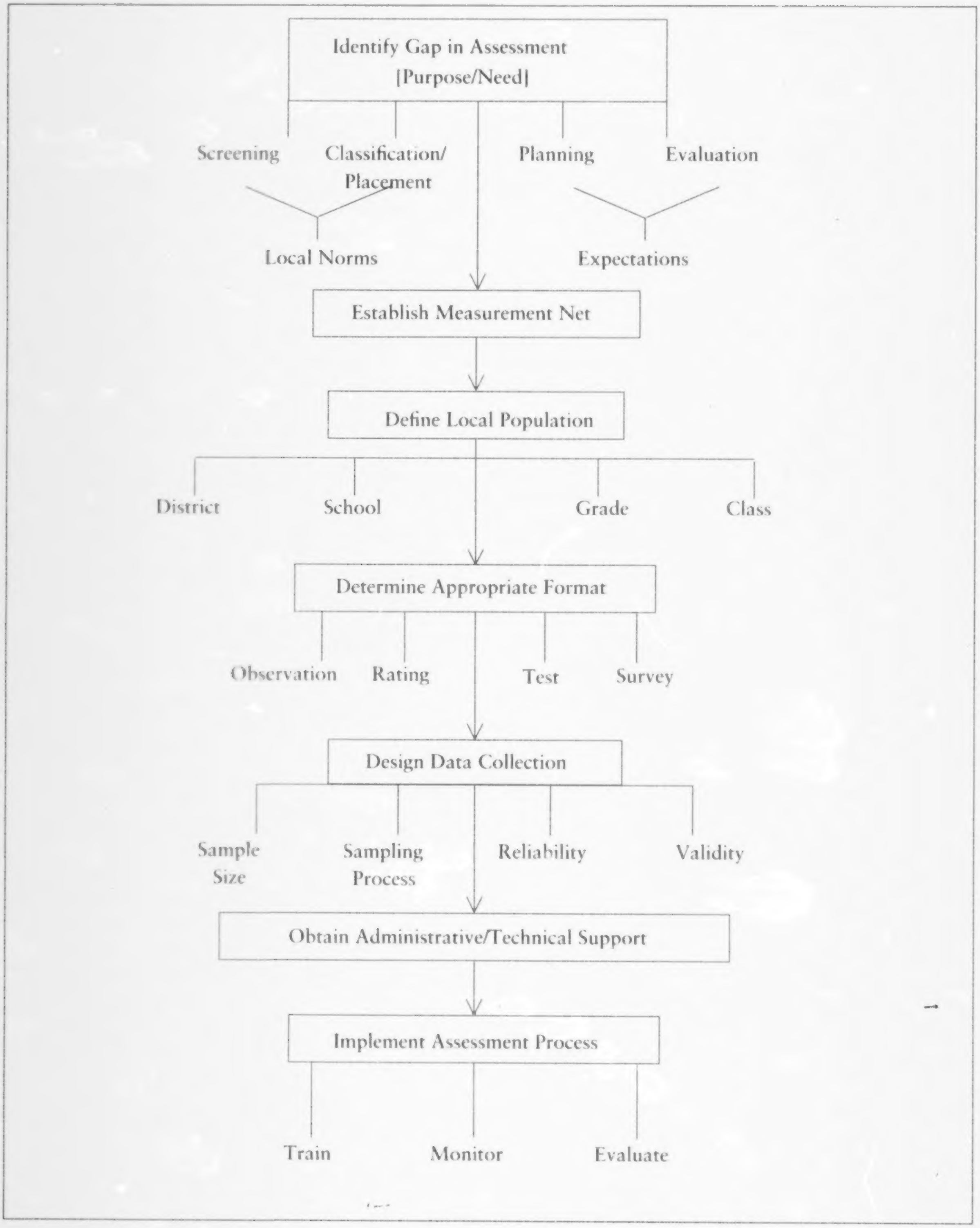
For reasons noted above, locally normed procedures are well-suited for the assessment of social and functional behaviors, because these are frequently situation-specific and tend to reflect localized cultural and community values and expectations. Normative measures typically are most appropriate for identifying, classifying, and sorting individuals, and are less often appropriate for specific intervention planning or progress monitoring.

The use of locally normed measures enables school personnel to directly address the need for special services as well as eligibility. If most students in a third-grade class are unable to independently exhibit social problem-solving skills and all score below the 25th percentile on a nationally normed scale of social skills, then John's "below average" performance on that scale will not be regarded as discrepant from his classmates. Rather than identify all as in need of remedial or special education, as might be indicated by using nationally normed tests, the locally normed procedure indicates that John is functioning like his classmates or is meeting most of the demands of his current class placement. However, if John's areas of deficit are dissimilar to those of his classmates, then some type of intervention would be warranted to enable him to meet the expectations of his teacher and to avoid referral for more restrictive programming.

Is the procedure intended to serve as a screening device, with students who fall below some set criterion to be referred for more in-depth assessment? Or is the procedure intended to be used to make placement/programmatic decisions? Local norms can be appropriately applied to both purposes, but should not be used in isolation to make diagnostic decisions or special placements. Locally normed measures can help limit the number of students for whom more complete diagnostic information will be obtained by sorting out a group who appears to be at risk relative to the typical students in the local population. Both absolute and relative performance data should be obtained before making placement decisions.

Depending on the format and content of the procedure, some locally normed measures may be appro-

Figure 1. Developing local norms for behavioral assessment.


Identify Gap in Assessment
[Purpose/Need]
Screening
Classification/
Placement
Planning
Evaluation
Local Norms
Expectations
Establish Measurement Net
Define Local Population
District
School
Grade
Class
Determine Appropriate Format
Observation
Rating
Test
Survey
Design Data Collection
Sample
Size
Sampling
Process
Reliability
Validity
Obtain Administrative/Technical Support
Implement Assessment Process
Train
Monitor
Evaluate

priate for program planning, with the normative data serving as a benchmark or criterion level of performance. Students who fall below this benchmark might be identified for intervention. For example, if most fifth graders are able to use a problem-solving approach to resolving peer conflict, then those who are rated low on this skill might be referred to a conflict resolution program.

Generally, norm-referenced measures cannot be repeated at frequent intervals to measure progress or response to intervention. At annual intervals, or perhaps twice per year, teacher ratings of a student's skills on a locally normed scale might provide useful data regarding the degree of discrepancy between a student and his or her peer group following implementation of intervention services.

The "Measurement Net"

In a problem-solving model, educators develop questions that the assessment will attempt to answer. Questions that might be appropriately addressed by a locally normed measure of social/functional skills include:

1. How do the student's social skills compare to those of his or her classmates?

2. Are the student's deficits in areas where staff expectations are high or low?

3. Has the student's relative performance of locally desired social skills improved following the social skills group training program?

The assessment tool must address the behaviors/skills relevant to the question or problem area. In the examples listed above, "social skills" is the apparent domain of concern. To find answers, both the skill level of the referred student and the expectations of school staff must be addressed by the assessment.

Whatever the area of concern, the skills or behavior of that domain must be clearly defined and adequately sampled within the boundaries of the measure's intended purpose. What skills and behaviors will be included in "social skills?" Is an in-depth, task-analyzed sampling of these skills needed or will a more global sampling of general skills suffice? Are multiple skill areas (domains) needed, such as adult-directed interaction versus peer-directed interaction, or will a single domain such as interpersonal interaction be adequate? Decisions in regard to these questions will help determine the content and length of the measure.

Shinn (1989) describes the establishment of a "measurement net" to identify specific skills to be included in locally normed measures. A pool of possible skills/test items is generated by requesting information from teachers and by surveying available curriculum and research literature. Surveying teachers regarding the behaviors of typical, successful students versus unsuccessful students will provide a starting point for developing a school- or classroom-based behavior rating scale. A review of the objectives of a social skills training curriculum will also contribute tasks/skills to the measurement net. This pool of potential items can then be reviewed by teachers and others, and field tested before final decisions regarding the content of the measure. A similar approach can be taken when considering local norming of an existing test or scale: Reviewing and piloting would be necessary to determine if the tool's content were locally relevant

Defining the Local Population

Who will be the subject of the assessment? Generally, one considers developing local norms or new locally normed procedures because some or all of the population of concern is inadequately served by existing norms and measures of the relevant behavioral domains. Defining the "local" population is critical. When a fair measure of the adaptive behavior skills of Native American students is desired, it makes little sense to randomly sample from the entire school population in a district of only 12% Native American students: The new norms would still reflect a very limited portion of the target group. If the target group is to be "urban midwest children," then the normative sample might be randomly drawn from an entire midwest, urban district.

Some behavioral concerns are so situationally specific that the target population appropriately is an individual classroom or school building. Even in situations where the behavior may have more generalized consequences, intervention may be most appropriate when it addresses skills needed in the immediate environment of the classroom. Gresham (1999) notes that "Students who eventually are classified as EBD often fail to meet teachers' *social behavior standards* and surpass teachers' *tolerance limits* for maladaptive behavior" (p.117); such standards and limits clearly vary across teachers, schools, and communities. Therefore, by using the typical behavior of students in a specific classroom as the "norm," as well as understanding the expectations of their teacher(s), is more likely to lead to effective intervention than would normative comparisons with students in the school or district as a whole. Defining the population to serve as the "standard" is critical to the design of the measure, to the development of reliable and valid norms, and to the ultimate usefulness of the measure as a problem-solving tool.

Appropriate Formats for the Assessment

The format selected for any assessment tool must be appropriate for the assessment's purpose, desired domains, and target population. In behavioral and functional skills areas, observation is often the most practical direct assessment approach. Indirect methods such as checklists and rating scales are commonly used and more easily developed at the local level than standardized individual tests. Rating scales can serve as criterion measures and/or as normative measures in behavioral and functional assessments. While third-party data are inevitably vulnerable to some subjective judgment, parent and teacher ratings of specific behaviors can be highly reliable and valid (e.g., Gresham, 1981; McConaughy & Ritter, 1995). When developed and normed locally, such procedures reflect the community standards and expectations for performance.

An alternative means of establishing local norms is to obtain ratings of expected or preferred performance rather than obtain the direct ratings of individuals from a representative sample. For example, instead of rating the social behaviors of 10 "typical" or randomly selected students, a sample of teachers would be asked to rate the importance or desirability of those social behaviors as related to classroom success. Referred students' behaviors would then be rated and compared to the established expectations for that school or district. This approach could also be limited to one classroom and one teacher's expectations. While teacher expectations are not necessarily realistic or consistent with the rated behaviors of typical students, these expectations tend to be stable over time and are highly related to referral to special education (Hersh & Walker, 1983; Gresham, 1999).

Once the type of measure is determined, the specific format must be considered. Rating scales, for example, can require yes/no responses, ratings of the frequency or severity of problem behavior, or ratings of the degree of independence or success of the individual's performance. The specificity of the ratings and format for responding will vary with the level of inference desired in relation to the scale's purpose: Psychologists must seek the most practical balance between precision and user-friendliness.

For the purpose of classification or screening for more detailed assessment, the most simple and global ratings may be sufficient. However, for intervention planning, effective measures typically differentiate deficits in skill versus deficits in performance (Gresham, 1984). Multipoint rating scales more reliably reflect important differences in the frequency and quality of target behaviors when compared with dichotomous scales (Edelbrock, 1983), although complex ratings can be overly demanding for the rater and possibly limit the usefulness of the results. Furthermore, highly demanding rating tasks could significantly reduce the level of cooperation needed for data collection.

Similar considerations apply to the development of standardized observational systems from which local norms are derived. Complex coding procedures may yield more specific data but also typically require extensive training for reliable use. Systems commonly used in research may be unnecessarily complex for classroom implementation and the intended level of decision making.

Data Collection and Analysis

Developing local norms requires careful consideration of the level of technical adequacy needed for decision making. Special education labeling and placement have obvious long-term implications for the student, and a higher level of technical confidence is necessary than in the case of screening. The general considerations of reliability and validity of norm-referenced procedures apply to the development of locally normed measures. It is typically impractical, however, to hold locally normed measures to the same standards of technical adequacy used to judge nationally normed procedures. Generalization from locally normed data should address inherent limitations of smaller samples, restricted sampling procedures, and situational specificity.

Local norms should appropriately reflect the population of concern, be it a classroom, school building, or school district. The standardization sample should have proportionate representation according to relevant demographic factors such as age, grade, gender, economic status, and ethnicity. Depending on the tool's purpose, students with disabilities may or may not be appropriately included in normative samples. When norms are desired for the entire school district, adequate geographic representation is necessary, as well as sampling across the various curricula and organization options present in the district. The normative group might include all students from that population rather than a random sample, particularly when the norms are to be derived from a single classroom or grade level.

What norms will be available for the interpretation of results? Separate norms for groups known to differ significantly on the target behaviors are preferred for classification and placement purposes, but collecting sufficiently large samples for multiple norming groups is often impractical. Age or grade-level norms tend to be the easiest to construct, assuming that development is a significant factor. Some problematic and social behaviors do not appear to be highly related to age within the school population; therefore, gender-specific norms may be more appropriate for some behavioral domains. Ethnic group norms may also be desirable for some purposes, but often the smaller cultural groups cannot be adequately sampled within a school or district.

What types of normative scores are desired? Percentiles are often the easiest scores to report and interpret, but eligibility criteria often require the use of standard scores. Standard scores can be derived from any distribution, but distributions significantly skewed away from the normal curve yield standard scores that can be misleading.

Sample sizes will dictate reliability of norms and generalizability to similar students in the population. Obviously, larger samples should be more reliable than smaller samples, but how large a sample is necessary for the purpose of the procedure? When percentiles are desired, measurement experts generally recommend that at least 100 individuals be included in each comparison group (e.g., each grade level) so that "true percentiles" can be derived. Smaller groups require "smoothed" percentiles using linear interpolation in order to determine values at each percentile point. Groups of fewer than 100 may nevertheless yield useful norms when sampling is conducted carefully, but the scores should be interpreted with greater caution.

It clearly is impossible to determine true percentiles for single classroom samples, and groups of 25-30 students will certainly not yield the stable normative data possible with significantly larger groups. However, means and standard deviations can be derived and used for screening, planning, and evaluating student progress at the classroom or building level. Such samples can be used effectively for screening purposes and can serve as a practical alternative approach for developing classroom norms for each class or grade level in a school. Samples of 5–10 typical students from each classroom can serve as a standard for comparison with referred students in order to obtain a gross estimate of deviation from the norm. Such data can help teams prioritize referral for more extensive assessment or serve as a first-level screening to identify students for intervention. Depending on the type of measurement, small classroom samples may offer the only practical means of collecting normative data without external funding resources.

Initial piloting of a new measure or new norming procedure with small classroom or building samples may be desirable even when the ultimate goal is district-level norms: The smaller investigation provides a cost-effective means of field-testing materials, procedures, scoring, and decision making. Small investigations can also be effective in establishing teacher expectations as a practical alternative to true norms.

The collection of normative data should, to the extent possible, include data regarding internal consistency, stability of results, and validity relative to the assessment purpose. Depending on sample size, some or all of the sample can serve as a test-retest group. Appropriate criterion measures, such as similar scales or class grades, can be included to examine concurrent and predictive validity. Less formal procedures, such as referral rates, placement rates, and observed response to intervention, can also be useful in validating local norms. With sufficiently large samples, statistical tests of discriminant validity can be applied to determine if the locally normed procedure adequately differentiates groups of students for eligibility or treatment purposes.

When developing normative observation systems and third-party rating scales, one must consider inter-rater agreement. Typically this is determined by comparing the results of two independent observers/raters, such as teacher and parent, reading teacher and math teacher, or two trained observers making simultaneous observations. Behavior scales are often criticized when inter-rater agreement is only moderate. However, when the target behaviors are assumed to be situationally specific, then a high degree of inter-rater agreement may not be realistic. In fact, differences between raters may be of both diagnostic and prescriptive value. Some assessment systems are designed to obtain two or more sets of ratings or observations of the same student in order to provide such comparisons. The degree of acceptable inter-rater difference will of course depend on the purpose of the assessment and level of inference desired.

Administrative and Technical Support

The development of local measures and local norms is typically carried out by school district personnel, such as school psychologists, sometimes with the assistance of grants and in collaboration with university researchers. Regardless of the scope of the project, individuals developing these procedures need the support of school administrators. Professional time must be allocated to the project, and the project must thus be regarded as a priority among the many tasks of the school psychologist. The administration must therefore understand and support the rationale for developing local norms and perceive the proposed project as a cost-effective means of affecting student outcomes.

General support from the school district administration is an essential first step, but support from building principals is critical to implementing data collection. Parents and teachers will ultimately be involved in data collection, either directly by responding to rating scales or by administering tests, or indirectly through the consent process. The endorsement and cooperation of the building principal may help to secure the cooperation of parents, staff, and students, and lend credibility to the project. However, directives from administrators are not sufficient to ensure cooperation of subjects and respondents. Teachers and parents must also perceive that the project leads to better services for students and involves minimal time, effort, and disruption of the normal school routine.

Finally, to successfully implement and complete a local norming project, the school psychologist needs access to sufficient technical support. Very small studies (such as classroom norming projects) may require minimal clerical support, data entry, and data analysis. Larger scale projects such as district-wide norming may require additional funding (such as grants) to secure computer time, data entry personnel, consultants with statistical expertise, and, in some cases, data collection personnel.

Large school districts often have research departments with adequate support for such projects, while smaller districts may have to seek expertise elsewhere. Local universities often offer opportunities for collaboration, shared computer access, and pools of inexpensive labor for data collection.

When external funding is needed, local sources often offer the best opportunities for relatively small grants. State departments of education, local corporations, and private foundations often provide grants for projects directed toward at-risk and special needs populations. Larger school districts often employ one or more individuals to identify such funding sources and to assist staff in applying for grants.

Implementation Issues

The final step in establishing local norms is the development of an implementation plan. The plan should address relevant timelines for training staff in the new procedure(s), a system of monitoring the use of the procedure(s), and methods of evaluating the impact of the procedure(s) in the context of the assessment's intended purpose. Monitoring can be accomplished through periodic surveys or reporting systems that help determine if procedures were appropriately followed. Depending on the assessment's purpose, evaluation plans might address referral and/or placement rates, impact on decision making, teacher satisfaction, and related issues. If resources were available, then evaluation might also include validation through discriminant analysis and replication studies.

BEST PRACTICES

The development and implementation of a locally normed assessment procedure unfolds as a problem-solving approach to decision making (see Figure 1). At each step, the school psychologist is confronted with questions to answer in order to best shape the final measure to the needs of the classroom, school, or district. Regardless of the domains of behavior measured or of the type of measure developed, this sequence of decisions allows the school psychologist to adapt the assessment tool to the identified needs, local population, and available resources.

For the purpose of this chapter, this decision-making sequence will be described in the context of three case-study illustrations, using as the examples the development of the Mainstream Survival Skills Assessment (MSSA) by Canter and Heistad (1990), the development and implementation of a district-wide behavioral screening tool at the district level, and the application of this district screener to the development of norms at one high school.

The Mainstream Survival Skills Assessment Project

While the MSSA is a multimethod system addressing functional and social behavior through ratings, observation, and interviews, this discussion will include only the locally normed rating-scale components.

PURPOSE OF ASSESSMENT

During the mid-1980s, school psychologists and other team members repeatedly were frustrated by the apparent discrepancy between the behaviors that prompted special education referral and those behaviors that available tools were designed to assess. Although state and federal rules mandated assessment of adaptive behavior in school as well as home/community settings as part of the identification of "mental handicaps," there were very few measures published and none appeared to be specifically relevant to the diverse local population. School psychologists in a midwest urban school district initiated a project to address this gap in technology through the development of a locally normed rating scale.

After reviewing literature and informally surveying local teachers regarding factors related to school success and failure, "school survival skills" were identified as the general target behaviors for the new assessment. Survival skills were defined as task-related behaviors such as academic engagement, following directions, seeking assistance, and organizing materials, as well as functional academic, personal, and social competencies (Cobb & Hops, 1973; Hops & Cobb, 1974) that have been found to effectively differentiate successful from non-successful mainstream students (McConnell et al., 1984). It was therefore hypothesized that assessment of school-based functional skills would contribute important data to classification and placement decisions, to predicting student outcomes in alternative settings, and to developing more effective, ecological interventions. It was highly desirable that the procedure be sufficiently robust to be useful in eligibility decisions and that student performance be readily compared to teacher expectations.

ESTABLISHING THE MEASUREMENT NET

To be included in the "net," it was essential that items reflect skills related to successful and independent functioning in mainstream classrooms and that the rated behavior was readily observable in school and classroom environments. In addition to an extensive review of relevant literature, K–8 teachers from local schools were surveyed regarding their expectations and observations; currently available measures of functional and problematic behavior were reviewed; and a preliminary set of items was generated and reviewed by a panel of regular and special education teachers, school social workers, and school psychologists. These skills were then organized into four (and later condensed into three) general domains of functional academics, task orientation, personal independence, and social skills.

DEFINING THE LOCAL POPULATION

After trying out items and discussing the procedure with teachers, it was decided to limit the scope of the measure to the elementary (K–6) population. In developing norms, representative samples of all district students who participated in mainstream programs, including those with mild disabilities and with limited English proficiency, were to be included, as well as representative samplings of the district's non-white ethnic populations and economic diversity. To ensure geographic representation as well as sampling of all organizational and curricular structures in the district, students from each grade level at every district K–6 school were included in the normative sample. Norms for each grade level were desired given the documented relationship between adaptive behavior and social skills and age level across the school years.

DETERMINING APPROPRIATE FORMATS

A three-point scale reflecting independence in typical functioning was selected for both the purpose of cost-effective test development and the ultimate goal of implementing a practical data collection procedure. A second scale was also desired with a subset of identical items for teachers to rate the skills' importance to classroom success. These teacher expectations would provide a template for that classroom.

DATA COLLECTION AND ANALYSIS

The MSSA rating scales followed traditional test-development procedures, including pilot testing, standardization with a random sample of mainstream students, tests of reliability and validity, and discriminant analyses using special population samples. The normative sample was derived through proportionate random sampling of each elementary school's enrollment lists. To obtain the desired target samples of 100 students per grade level, samples of 140–150 were selected for the norming pool. Subsamples of this total were included in test-retest reliability, inter-rater agreement, and concurrent validity samples, using the Vineland Adaptive Behavior Scales, Classroom Edition as the criterion measure.

Discriminant validity samples were drawn from special education enrollment lists of students in resource and self-contained classroom programs for children with mental impairments, learning disabilities, and emotional/behavioral disorders. Another sample was selected from the Limited English Proficiency program.

The 50 items with the highest degree of technical adequacy and ratings of teacher importance formed the Teacher Expectations Scale. A sample of district teachers at each grade level (K–6) was asked to complete this scale to obtain information about expectations across and within grade levels. Extensive analyses were conducted to examine age, gender, ethnic, and SES differences in teachers' ratings of sampled students, as well as to examine different special education samples. Norms tables were constructed by using smoothed percentiles with linear interpolation for the final normative samples at each grade. Rationale, data collection procedures, norms tables, technical data, and recommendations for applying data to educational decisions were included in a manual published by the district for school personnel (Canter & Heistad, 1990).

ADMINISTRATIVE AND TECHNICAL SUPPORT

Many sources of support within the local district were tapped for this project: the Research and Evaluation staff provided technical support; Psychological Services staff provided coordination and professional consultation; principals and special education administrators encouraged teacher participation; and the Minnesota Department of Education awarded a grant totaling approximately $30,000 to fund project coordination, materials, data entry and teacher incentives in the form of small stipends.

IMPLEMENTATION ISSUES

The MSSA project resulted in a teacher-rating scale that meets accepted standards of reliability and validity and is in fact technically comparable to many published, nationally normed measures of adaptive and social behavior (Canter & Heistad, 1990). The norming population very closely reflects the demographic characteristics of the district, and, as predicted, ratings differentiated disabled from nondisabled and mildly disabled from more severely disabled students. As a contingency for securing funding, the MSSA was normed at the state level in a replication of the district-level norming project. This statewide study served to further validate the data obtained in the earlier project (Canter, Schrot, & Heistad, 1990).

The MSSA scales have been used extensively in the district as components of special education eligibility assessments and as fundamental data in planning interventions and placements for mildly disabled students who participate in inclusion programs or who are making the transition to less restrictive programs. To ensure appropriate implementation, numerous presentations have been made to school personnel, particularly to special education personnel. Over time, additional data have been collected to enhance understanding of survival skills relative to specific groups, including students with severe emotional/behavioral disorders, students with Limited English Proficiency, and Native American students. Of particular value to the Problem-Solving model initiated in the district in 1993 has been the comparison of teacher expectation ratings to teachers' ratings of referred students' performances that have provided the foundation for ecological interventions. At times, these data have also been used to help identify specific classrooms where students are most likely to succeed.

District-Wide Behavior Screener

Whereas the MSSA was developed in response to regulatory as well as population changes of the 1980s, identifying behaviorally at-risk students to better address achievement and school safety became an integral part of many school improvement plans of the 1990s. The primary goal for such a screening process is to identify students who differ significantly from their peers and may need additional support and early intervention to prevent further deterioration of behavior. The challenge of identifying at-risk students is even greater when working with a diverse, urban population in which child rearing practices, cultural expectations, English language proficiency, and socioeconomic status may vary significantly from those of the mainstream Euro-American culture.

PURPOSE

Traditionally, teachers refer individual students who are felt to be "deviant" from their classmates to the Child Study Team for special education evaluation. This referral approach may reflect possible personal bias and undermine the effort of classroom intervention in the general education setting. Moreover, many teachers vary in their tolerances for, and awareness of, different behavioral problems. Consequently, a systematic, less-biased behavior screening process that provides information about the student's behavior within the context of local social norms and expectations is essential.

During the 1998–1999 school year, school psychologists and staff members of the same midwest urban school district in the above example initiated a project to develop a locally normed behavior screener as a part of the general screening process developed in response to an Office of Civil Rights (OCR) compliance agreement with the district to reduce bias in special education referral and evaluation. The screener was designed to help classroom teachers organize observed information regarding their students' behavior in the classroom and other school environments and, subsequently, to identify at-risk students for early intervention. Further, the screener was designed to complement the existing Problem-Solving model that had been undergoing implementation across the district during the previous 5 years.

THE MEASUREMENT NET

The evolution of the Behavior Screening Checklist began with a panel of school professionals, including psychologists, social workers, special and regular education teachers, and other personnel, that reviewed relevant literature and conducted an informal staff survey. The panel then generated a set of specific behaviors related to social and behavioral functioning in the classrooms. These behaviors were further organized into three general behavioral categories: Task Management, Physical and Verbal Behavior, and Socialization. In the area of Task Management, teachers were to rate attention to classroom routines, following rules and procedures, completing work independently, and handling change. The Physical and Verbal Behavior Area addresses appropriate versus inappropriate behavior. Target behaviors within Socialization include peer interactions and relationships, classroom participation, and self-image. Classroom teachers were asked to rate their students on a scale from 1 to 5 on these specific behaviors.

DEFINING THE LOCAL POPULATION

The Behavior Screening Checklist was developed as part of the district-wide screening process to identify students at risk for a wide range of problems in learning and behavior. All district students were to be rated through global screening, including those who are English Language Learners (ELL), from kindergarten through twelfth grades. The norming of the Behavior Screening Checklist coincided with the implementation of the OCR compliance guidelines during the 1999–2000 school year. Initially 20 and, later, another 20, schools implemented the screening project during the first year. Norms were developed based on data obtained from 11 of these pilot sites.

Each teacher in the participating pilot schools was asked to complete the Behavior Screening Checklist for all of his or her non-IEP (Individual Education Plan) students in the fall. The normative sample included student ratings from five K–5, four K–6, and two K–8 schools. Although these schools were not randomly selected, they mirrored the district population in terms of geographic location and student population. Furthermore, such selection process allowed a more efficient use of limited resources and larger sample size for each grade level. It was also determined that, at least initially, only grade norms for the K–6 population would be developed because of limited sampling at grades 7 and 8, and that gender-specific norms would not be derived at this time.

DETERMINING APPROPRIATE FORMATS

For a screening measure designed for district-wide implementation, cost effectiveness and user friendliness are particularly important to assure practical data collection. The 10-item Behavior Screening Checklist is presented as a 5-point Likert-type scale and formatted on a one-sided single page. The behaviors are delineated in neutral descriptors. Teachers are asked to rate their students on a 5-point scale with "1" being the most desirable. The checklist generates three sub-scale scores and a total scale score.

DATA COLLECTION AND ANALYSIS

The Behavior Screening Checklist was designed to be a global screening device. Yet, an extensive effort was made to ensure acceptable standards of reliability and validity. An internal consistency reliability coefficient of 0.80 as recommended by Salvia and Ysseldyke (1995) for screening devices was adopted. A pilot study using exploratory analyses was conducted on the K–6 data collected from three elementary schools during the 1998–1999 school year. The final normative samples included 500–600 students for each grade level except the sixth grade, which contained 341 students. A subsample of the norm group was used to study internal consistency and to examine agreement of items within each subscale. A separate sample of third-grade students from six classrooms at two elementary schools was used to examine inter-rater reliability. Furthermore, ratings of students with Emotional/Behavioral Disorder ($N = 34$) who were referred for a more restrictive setting during the 1999–2000 school year were examined and compared to those from the normative samples to determine if the checklist differentiated those who required extensive behavioral intervention.

ADMINISTRATIVE AND TECHNICAL SUPPORT

The development and implementation of the Behavior Screening Checklist was part of the district's OCR compliance agreement, which provided financial and personnel support for the norming project, as well as administrative support needed to implement the screening procedure. The project personnel are school psychologists with graduate training in research design and statistics who consulted with the Research and Evaluation staff for more advanced technical support in data analyses.

IMPLEMENTATION ISSUES

At each district site participating in the OCR Screening Project (40 schools as of September 2000), classroom teachers are asked to complete the checklist for each student in their classrooms. Norm tables for each grade level are available for staff members to make a normative comparison for their students. A cutoff score, based on the score distribution in the normative samples, was recommended, which identifies the top 5–10% percent of students as being most "at-risk." Decisions about additional screening, intervention design, and referral for more intensive support or assessment are site-based within the parameters of the district's Problem-Solving model, Guidelines for Reducing Bias in Special Education Assessment, and recommended practice.

The Behavior Screening Checklist provides a systematic process to identify at-risk students within the context of local norms and expectations. It meets acceptable standards of reliability and validity for screening purposes. Although the checklist provides valuable normative information for program planning for target students, it is not intended to be used as a stand-alone measure. Multiple sources of data such as parent interview, staff report, school record, etc., are essential as part of the overall screening procedure and Problem-Solving model. Particularly, additional cultural and socioeconomic data are needed to reduce the danger of biased results.

District Leadership staff and teams from each participating school were trained to use the checklist, using a "trainer of trainers" model, which provides training to a small group of staff members who in turn provide the training to larger groups of building personnel. The checklist complements the district's Problem-Solving model that emphasizes structured pre-referral intervention and functional evaluation procedures. It provides information to help identify target behaviors for intervention and baseline data for progress monitoring.

Development of Local Behavior Norms at a High School Level

The Behavior Screener described in the preceding section was applied to one urban high school in order to establish building norms. The high school has a population of approximately 1,500 students, about 40% of whom speak English as their second language and over 75% of whom receive free or reduced-price lunch. Project components unique to the high school norming project are described below.

PURPOSE

At one urban high school, local norms using the Behavior Screener were established during the 1999–2000 school year. Beyond addressing a district mandate to reduce ethnic or racial bias in special education referral, the screeners were also intended to direct intervention to students who were experiencing behavior difficulties. As part of a school-wide and district-wide effort to create a more systematic method for addressing behavioral concerns, the screeners were to be used to empirically evaluate trends in behavior referral and intervention at this high school.

DATA COLLECTION AND ANALYSIS

Each teacher was provided with screeners for all students enrolled in their classes and provided staff development time to complete them. A total of 4,915 screeners were completed for 1,540 students. An average of 75% of each student's teachers completed screeners for each student (generally three of a student's four teachers). Originally, special education students were not intended to be included, but some teachers rated all of their students, including those already receiving special education services.

At the time of the initial ratings, some teachers expressed concern that the screener was directed more toward students who acted out and appeared to ignore some students experiencing high levels of depression and anxiety, as well as some very isolated students who were English language learners. For the purpose of data interpretation, an experimental "internalizing scale" based on 3 of the scale's 10 items was developed to more specifically address the large number of English Language Learners and students with fewer externalizing behaviors. Thus for each Behavior Screener Checklist, two scores were derived: total score based on all 10 items and an internalizing score based on these 3 items alone.

After data entry was completed, a list of "students of concern" was developed. The 95th percentile was used for identification. This cut score was intended to identify a manageable number of students most at need of behavioral support. Additionally, the 95th percentile is two standard deviations from mean, which is generally accepted as being significantly different from the mean of "average" students. Both the Total Score and the Internalizing Score were used to identify students above the 95th percentile. In order to be identified as a "student of concern," two or more teachers' ratings were required to be above the 95th percentile on either scale for identification.

When the list of students of concern was developed, a total of 50 regular education students were identified, with an additional 17 special education students who also had scores above the criterion 95th percentile. This list included a disproportionately large number of ninth graders (55% of total list), which is similar to informal teacher report and referral rates to the student support teams. Gender representation was nearly equal, with 52% boys and 48% girls on the Students of Concern list.

One of the original purposes of the behavior screener was to reduce potential racial or ethnic bias in special education or intervention assistance team referrals. When examining the composition of the list of students of concern, the percentage of African American, Native American, and Hispanic American students were very similar to the percentage of these students at this high school. However, there were proportionately more white students on the list (38%) than are reflected in the building's enrollment (25%), and proportionately fewer Asian American students identified (7%) than enrolled (24%).

Validation of the screening process was accomplished in a number of ways. Initially, the list of students of concern was informally compared with the list of students referred to the school's pre-referral intervention teams. The degree of overlap indicated that some the students on the list were also those about whom teachers had already expressed concerns. An additional informal validation was provided by the inadvertent rating of students in special education, because many of these students who were above the 95th percentile had IEP goals related to some aspect of school behavior. A more formal method of validating the results involved examining the number of student suspensions compared to their score on the screener. A direct positive relationship was found: Students with a higher number of suspensions during the year tended to have higher scores on the Behavior Screener. The Internalizing Scale, however, did not have a similar relationship with suspensions, an expected finding given that students are not generally suspended for internalizing behaviors.

ADMINISTRATIVE AND TECHNICAL SUPPORT

Significant supports were needed both at the district and school level to initiate the process of development of the building behavior norms. At the district level, preparation of the screeners and data entry were critically important before and after the teachers actually completed the screeners. At the school level, the administration was fully in support of the process, providing one full day of staff development devoted to training on the purpose and implementation of the behavior screeners, as well as time to complete the screeners. Clerical assistance with gathering information from students' files and organizing the data gathered was also provided. Additional release time for members of the pre-referral intervention teams and the coordinator of the project would have facilitated more timely intervention planning.

IMPLEMENTATION ISSUES

Once the list of concerns was compiled and initially validated, these students were referred to the pre-referral intervention teams. The teams were to then review the student's files, interview the student's teachers, parents, and the student. With the information gathered by the team and the data gathered on the screener, the team was then to plan interventions and monitor their success.

One of the unexpected consequences of the process of developing these behavior norms was an increased awareness of systems-level changes that needed to occur to better support behavior at the school. These include developments of alternatives to suspension, improved data collection regarding behavior at school, and better understanding of how to address problem behavior at a secondary level and how to structure the school to help increase staff ownership of student success.

In the second year of implementation, students new to the school will be rated by their teachers and the students on the list of concern will be re-rated. The pre-referral intervention teams will work with those students who are above the 95th percentile at the time of the rating. Systemic work on data collection and behavior interventions are continuing. Additional changes are taking place on a larger scale at the school to support students' success, both academically and behaviorally. As data collection continues, it will be possible to evaluate the effects of these changes as they impact student behavior.

SUMMARY

This chapter has presented a rationale for the use of local norms and standards in the assessment of school-based functional and social behaviors, a set of basic considerations in the development of local procedures, and best practice guidelines using case-study examples. School psychologists are ideally suited to the roles of test development consultants and project coordinators: They possess knowledge of educational and psychological measurement and basic research design and intimate knowledge of the purposes of assessment in education and of the gaps between our technology and student/teacher needs.

The use of local norms for identifying and understanding achievement problems has been promoted among researchers and practitioners, particularly regarding implementing Curriculum-Based Measurement strategies. The advantage of locally normed procedures for identifying and understanding behavioral and functional skills problems has been well stated in the literature but appears to be less widely implemented in practice. Even very small projects at the classroom or building level can provide the local frame of reference necessary for appropriate identification of target behaviors that are essential to positive student outcomes. Skills that are basic to daily functioning in significant settings must be identified, analyzed, and directly taught if students are to succeed in mainstream schooling and, ultimately, meet the demands of independent living.

Many published, norm-referenced procedures offer technical advantages over locally developed measures but rely on national norms and assumptions of commonality in their criteria for success. There is no doubt that such general standards for performance should be considered in the assessment process. However, the importance of ecologically valid assessment to effective intervention cannot be overstated. By including local standards and situationally specific performance criteria in the comprehensive assessment plan, school psychologists can help promote better practices in both problem identification and intervention for a broad student population.

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This article reports an observational study of behavioral conditions in mainstream versus special education classrooms that can be linked to intervention. Of particular relevance to local norming efforts is the review of research regarding local contingencies that impact teacher and student behavior and the description of data collection methods.

Shinn, M. R. (1989). Identifying and defining academic problems: CBM screening and eligibility procedures. In M. R. Shinn (Ed.), *Curriculum-Based Measurement: Assessing special children* (pp. 90–129). New York: Guilford.

This chapter, while specifically addressing CBM procedures, has useful applications to the development of local norms in general. Shinn discusses the creation of the "measurement net," alternative approaches to gathering local norms at the classroom/building/district levels, sampling procedures, data collection, and options for establishing norms.

Reschly, D. , Tilly, W. D., III, & Grimes, J. (1999). *Special education in transition: Functional assessment and noncategorical programming*. Longmont, CO: Sopris West.

This edited volume provides both overview and specific discussions of the applications of problem-solving models to the delivery of noncategorical special education services—including discussions of specific student populations, functional behavior assessment, legal parameters, and conceptual frameworks. Of particular relevance to local norming procedures are chapters by Shinn, Good, and Parker (severe academic deficits), Gresham (behavioral disorders), and disability determination (Tilly, Reschly, and Grimes).

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Best Practices in Classroom Interventions for Attention Problems

George J. DuPaul
Lehigh University
Gary Stoner
Mary Jean O'Reilly
University of Massachusetts-Amherst

OVERVIEW

Problems with attention to classroom instruction and schoolwork are among the most common difficulties exhibited by students in the United States. In fact, a recent survey of teachers indicates that approximately 16% of elementary school children display frequent inattention and/or poor concentration (Wolraich, Hannah, Baumgaertel, & Feurer, 1998). Attention problems often are associated with behavioral difficulties, such as impulsivity, high activity level, and aggression. When attention problems are severe and/or are accompanied by developmentally inappropriate levels of impulsivity and overactivity, the psychiatric diagnosis of Attention-Deficit/Hyperactivity Disorder (AD/HD) may be used (American Psychiatric Association, 1994). Approximately 3–5% of elementary school-aged children in the United States are diagnosed with this disorder, with boys outnumbering girls at about a 2:1 to 5:1 ratio (American Psychiatric Association, 1994; Barkley, 1998). Given that most public school classrooms include 20–30 students, teachers will likely address the needs of at least one student with AD/HD per school year. Further, AD/HD symptoms typically persist from early childhood through at least adolescence for a majority of individuals (Barkley, 1998; Weiss & Hechtman, 1993). Thus, attention and associated behavioral difficulties are likely to affect children's school functioning throughout their educational careers.

Children with attention problems and/or AD/HD are at higher than average risk for a variety of behavioral difficulties including defiance toward authority figures, poor relationships with peers, and antisocial acts such as lying, stealing, and fighting (American Psychiatric Association, 1994; Barkley, 1998). In addition to these behavioral risks, students with AD/HD frequently struggle scholastically, presumably due to their low academic engagement rates and inconsistent work productivity (DuPaul & Stoner, 1994). The results of prospective follow-up studies of children with AD/HD into adolescence and adulthood indicate significantly higher rates of grade retention, placement in special education classrooms, and school drop-out relative to their peers as well as significantly lower high school grade point average, enrollment in college degree programs, and socioeconomic status (Weiss & Hechtman, 1993). Lower than expected rates of work completion may, in part, account for the association of AD/HD with academic underachievement, because up to 80% of students with this disorder have been found to exhibit academic performance problems (Cantwell & Baker, 1991). Further, about 20–30% of children with AD/HD are classified as "learning disabled" because of deficits in the acquisition of specific academic skills (Knivsberg, Reichelt, & Nodland, 1999). Additional students with AD/HD may receive special education services as a function of being classified as "other health impaired." In fact, "other health impaired" is the fastest growing special education category, increasing 280% over the past 10 years, presumably due to an increased identification of students with AD/HD (U.S. Department of Education, 1999).

Research investigating the connection between academic achievement difficulties and disruptive behavior disorders consistently indicates that the presence of attention problems and other AD/HD symptoms is the key variable accounting for poor scholastic outcome (Rapport, Scanlan, & Denney, 1999). The academic achievement problems associated with AD/HD appear to be generic rather than isolated to one particular subject area (e.g., reading or math). In addition, children with attention problems and AD/HD frequently experience difficulties getting along with peers and teachers as well as making friends (Barkley, 1998). Thus, the identification and treatment of academic and social difficulties in this population is critical.

Given the risk for poor academic and social outcomes, school professionals must design and implement interventions to address not only the attention problems endemic to AD/HD, but also the academic underachievement and aberrant social behavior associated with this disorder. The two primary interventions for AD/HD are psycho-stimulant medication (e.g., methylphenidate) and contingency management programming (e.g., token reinforcement and response cost). These intervention strategies have been found to enhance rates of academic productivity and accuracy for most study participants (for review see Barkley, 1998; DuPaul & Eckert, 1997). Further, some children may require the combination of stimulant medication and behavioral intervention to show improvements in academic functioning. Despite their positive effects, these interventions cannot be applied in a generic fashion without considering the individual needs of specific students with AD/HD. Further, given the myriad difficulties exhibited by students with this disorder, interventions must be implemented across home and school settings for an extended period.

The purpose of this chapter is to outline the most effective school-based interventions for attention problems or AD/HD. First, we review basic considerations in designing interventions for this population. Next, specific proactive and reactive intervention strategies are delineated. Finally, a summary of the state-of-the-art in school interventions for students with AD/HD is provided.

Throughout this chapter, we emphasize several key themes. First, to be optimally effective, interventions must be designed based on assessment data gathered before *and* after interventions are implemented. One cannot make informed decisions about treatment without assessment data. Second, interventions must be tailored to meet the unique needs of individual students. The best way to accomplish this is by collecting systematic data about behavioral, social, and academic functioning. Finally, a balanced approach to intervention is necessary wherein both proactive and reactive strategies are included in each student's treatment plan. Teachers should be encouraged to manipulate both antecedent and consequent events to optimize student attention, behavioral functioning, and academic achievement.

BASIC CONSIDERATIONS IN PROFESSIONAL TRAINING

Inherent in the responsibility to design, implement, and evaluate interventions for students with AD/HD is an assumption of appropriate professional training and competence. At a minimum, this includes coursework and supervised experience in diagnostic and educational assessment, developmental psychopathology, interventions for achievement and behavior problems, and professional service delivery models involving collaborative problem solving.

A wide range of assessment skills and strategies are necessary to serve students with AD/HD. For example, assessment for decisions of diagnosis and classification will involve the use of norm-referenced behavior rating scales and systematic direct observations of student behavior. Other necessary strategies will include structured and semi-structured interviews, standardized assessments of achievement, functional behavior assessment, and perhaps assessments of learning aptitude (see Hoff & Landau chapter in this volume for a thorough discussion of these strategies). Some of these same assessment strategies also will be useful for intervention planning and intervention evaluation.

In schools, students with AD/HD often present problems in both the achievement and behavior domains. Thus, school psychologists and other professionals responsible for these students will need to have training in a wide range of empirically supported intervention strategies (Kratochwill & Stoiber, 2000). For example, these students often are treated with psychotropic medications, primarily stimulants. Knowledge of these medications and their effects on children encompass issues of dose-response and time-response relationships, potential side effects, and outcome evaluation monitoring strategies. Additionally, students with ADHD often are involved in behavior and performance management programs. Such programs may be teacher mediated (e.g., token economy and response cost systems), parent mediated (e.g., home-school notes systems), peer mediated (e.g., ClassWide Peer Tutoring), and/or self-mediated (e.g., self-management strategies) (see DuPaul & Stoner, 1994; DuPaul & Power, 2000). Once again, the high quality design of each of these strategies requires specific knowledge, skills, and experiences of the responsible professional.

Finally, the complexities of assessment, diagnosis, and treatment of students with AD/HD result in services that will inevitably involve multiple professionals, parents, and other community members. As such, professional skills in the areas of consultation, collaboration, and coordination of persons and programs are needed for ensuring the quality services delivered. Together, then, this professional set of skills and knowledge in assessment, diagnosis, child development, interventions, and collaboration comprise the foundations of professional service delivery for students with AD/HD.

Conceptual Underpinnings of Interventions for Attention Problems

There are a number of important considerations that underlie best practices in designing interventions for students with attention problems and AD/HD-related difficulties. First, we have observed that all too often, school professionals rely on reactive and punitive procedures in attempting to change the behaviors of inattentive students. In fact, the most common classroom intervention for disruptive behavior is a verbal reprimand from the teacher and/or removal from the classroom. Unless these procedures are used sparingly, with minimal affect, and in the context of a positively reinforcing environment, they are unlikely to be successful. What we believe to be more successful is a balanced approach wherein both proactive and reactive strategies are employed. Specifically, antecedent events that typically precede inattentive behaviors should be manipulated to prevent problematic interactions from arising. In addition, reactive strategies should not be confined to punitive approaches, but should be heavily weighted toward providing positive reinforcement when attentive and appropriate behaviors occur.

Another guiding principle when designing effective interventions for students with attention problems is to intervene at the point of performance (Goldstein & Goldstein, 1998). Stated differently, to be optimally effective strategies must be implemented as close in time and place as possible to the target behavior. For example, if the behavior of concern is attention to and completion of math work, then the most effective intervention strategies will be those that are used in math class at the time when students are expected to complete math work. The further removed the intervention is from the time and place where the behavior of interest occurs, the less effective that strategy will be. This guiding principle is based on growing evidence that impulsivity is the primary deficit underlying the attention difficulties and other symptoms of AD/HD (Barkley, 1998). Thus, interventions need to be implemented in the heat of the moment to have any chance at changing behavior of an impulsive nature.

Intervention strategies for attention problems should be selected on the basis of assessment data and empirical support from the research literature. Rather than choosing interventions on the basis of trial-and-error, school professionals should collect systematic data about a student's academic and behavioral functioning as well as the classroom environment in an effort to make informed treatment selections. For example, data regarding the possible environmental functions of inattentive behavior can be used to develop interventions that directly address the putative function of problematic behavior (for review see DuPaul & Ervin, 1996). In similar fashion, Curriculum-Based Measurement data can be used to set appropriate targets for and assess the value of academic interventions. School professionals also should consult the research literature regarding the most effective interventions for students with AD/HD. There is clear evidence, for example, that manipulating environmental events in the classroom leads to large changes in behavior among students with even the most severe symptoms of this disorder (see meta-analysis by DuPaul & Eckert, 1997). Because the research literature is constantly evolving, educators need to keep abreast of the latest findings relative to effective strategies for attention difficulties.

A final guiding principle in designing interventions for students with attention problems is to avoid a one size fits all approach. Interventions must be individually tailored to meet the needs of each student despite the fact that students may share a common diagnosis or behavioral profile. This process of individualizing intervention plans should take into account (a) the child's current level of academic and behavioral functioning, (b) the possible environmental functions of their inattentive behavior, (c) the target behaviors of greatest concern to the teacher and/or student, and (d) elements of the classroom and/or teaching style that might limit the effectiveness of some interventions. Individualized interventions should be developed through a consultative problem-solving process using assessment data and collaborative interactions among teachers, parents, and other school professionals.

Interventions for students with attention problems can be mediated by a number of individuals, not just the classroom teacher. Specifically, effective strategies can be implemented by parents, peers, or the students with attention difficulties themselves. When available, computers can be used to enhance attention to academic instruction or the completion of drill-and-practice activities. The overriding principle here is that we need to go beyond placing an onus on the teacher to address all difficulties related to attention problems. There are important resources (e.g., peers) in the classroom and home environments that can be used to deliver interventions in a more comprehensive and cost-effective fashion. Table 1 presents some of the most effective intervention strategies in the context of academic setting (i.e., elementary versus secondary level) and mediating agent.

Overview of Interventions for Attention Problems

The most important intervention agent in the school building is the teacher. By using effective instructional and behavior management strategies, the teacher can provide the child with AD/HD and the child's classmates a learning environment that permits all students to fully participate in classroom activities. These strategies also can help provide the class with more instructional time by reducing the time spent coping with behavioral crises. By using effective strategies as part of a well-designed prevention program can allow a teacher to deliver instruction and evaluate student learning without the continual distractions and interruptions that poorly managed problem behavior can provoke.

Designing, implementing, and maintaining strategies does require some extra planning and work, but the benefits are likely to make the extra effort worthwhile. It is important, however, that the intervention strategies are acceptable to the teacher and appear workable. A well-designed intervention that a teacher finds difficult to implement and maintain is not likely

Table 1. Possible mediators for school-based interventions

Intervention type	*Elementary*	*Secondary*
Teacher-mediated	• Instructional strategies • Token reinforcement systems	• Study skills instruction • Contingency contracting
Parent-mediated	• Goal-setting • Contingency contracting • Home-based reinforcement • Parent tutoring	• Negotiating • Contingency contracting • Home-based reinforcement
Peer-mediated	• Peer tutoring	• Peer coaching • Peer mediation
Computer-assisted	• Instruction • Drill and practice	• Instruction • Word processing
Self-directed	• Self-monitoring	• Self-monitoring • Self-evaluation

to be put into action on a consistent basis (DuPaul, Eckert, & McGoey, 1997). Additionally, the constant daily demands made on a teacher's time and energy often become a priority over preventive intervention work that may not show immediate results (Colvin, Kame'enui, & Sugai, 1994).

Teacher-mediated strategies can be used by any adult participant in the classroom, including teacher aides, substitute teachers, or parent assistants. Although most interventions require that each adult carry them out precisely as planned, the strategies are generally simple in design and easily taught to any adults that may be involved in the classroom. Continuity of strategies across adults in a classroom or school serves to reinforce the desired behaviors and to improve management of student behaviors across settings.

Teacher-mediated strategies can be proactive or reactive. A combination of the two generally provides the best results. Proactive strategies typically involve the entire class and are arranged to prevent academic and behavioral difficulties by altering the classroom conditions that allow problems to arise. Proactive strategies can be used throughout the school building and may involve instructional and support staff. These strategies directly benefit all students. Reactive strategies are used in response to problems that arise in the classroom, and may be individually tailored to a particular student's needs. Reactive strategies can be used to respond to both appropriate and problem behavior.

The goal of these strategies is to monitor and improve student performance. To achieve this goal, it is essential to clearly communicate expectations and to provide both positive and corrective feedback to students. Both proactive and reactive strategies require that expectations and feedback are communicated on an ongoing basis. To be successful in the classroom, students with AD/HD generally require frequent opportunities to actively respond to instruction while receiving continual feedback on their performance (DuPaul, Ervin, Hook, & McGoey, 1998). The following strategies delineate ways in which school psychologists and teachers can design classroom routines and instructional delivery to meet the needs of these students while improving outcomes for the whole class.

Proactive Interventions

Proactive or preventive interventions typically involve changing something in the classroom environment *before* a student's inattentive behavior has a chance to occur. If the teacher is able to recognize those situations and cues that are reliably followed by inattentive and disruptive behavior, then a time-efficient way of handling this is to do something beforehand rather than waiting to react to the student's behavior. For many children with attention problems associated with AD/HD, the two primary classroom situations that prompt inattentive behavior are teacher-directed instruction and the presentation of independent academic work. Further, inattentive behaviors can lead to academic difficulties, behavior problems, or both. Thus, in this section, examples of proactive strategies for preventing inattentive behavior associated with academic and behavioral problems are discussed. The selection of proactive interventions for individual students typically is guided by identifying antecedent conditions (i.e., variables related to task, person, time, or setting) that are associated with academic or behavioral difficulty.

PROACTIVE INTERVENTIONS FOCUSING ON ACADEMIC PERFORMANCE

Proactive interventions that focus primarily on academic performance include adjusting curriculum to student instructional level, ClassWide Peer Tutoring (CWPT), computer-assisted instruction, providing students with task choices, and directed notetaking activities.

A primary consideration in addressing the academic performance of students with attention difficulties is the degree to which the curriculum matches students' instructional levels. More specifically, some students may demonstrate significant levels of inattention and off-task behavior as a function of being exposed to curriculum material that is beyond their instructional level. Curriculum-Based Measurement (CBM) data can be helpful in determining the proper placement of student instruction within the curriculum (Shinn, 1998). In fact, in some cases, an adjustment in instruction based on CBM data can lead to notable improvements in task-related concentration. The vast majority of children with attention problems related to AD/HD, however, will require additional interventions to address their academic and behavioral difficulties.

Peer tutoring is defined as any instructional strategy wherein two students work together on an academic activity with one student providing assistance, instruction, and/or feedback to the other (Greenwood, Maheady, & Carta, 1991). A number of peer tutoring models have been developed which differ as to instructional focus (acquisition versus practice), structure (reciprocal versus nonreciprocal), and procedural components (e.g., number of sessions per week, methods of pairing students, type of reward system used). Despite these differences, all models of peer tutoring share instructional characteristics that are known to enhance the task-related attention of students with AD/HD including (a) working one-to-one with another individual; (b) instructional pace determined by learner; (c) continuous prompting of academic responses; and (d) frequent, immediate feedback about quality of performance (Barkley, 1998).

One of the most widely used peer tutoring programs is CWPT (see Greenwood, Maheady, & Carta, 1991), which has been implemented in general education classrooms to enhance the mathematics, reading, and spelling skills of students of all achievement levels. CWPT includes the following steps: (a) dividing the class into two teams; (b) within each team, classmates form tutoring pairs; (c) students take turns tutoring each other; (d) tutors are provided with academic scripts (e.g., math problems with answers); (e) praise and points are contingent on correct answers; (f) errors are corrected immediately with an opportunity for practicing the correct answer; (g) teacher monitors tutoring pairs and provides bonus points for pairs that are following prescribed procedures; and (h) points are tallied by each individual student at the conclusion of each session. Tutoring sessions typically last 20 minutes with an additional 5 minutes for charting progress and putting materials away. At the conclusion of each week, the team with the most points is applauded by the other team. Points are not usually exchanged for any back-up reinforcement. CWPT has been found to enhance the on-task behavior and academic performance of non-medicated students with AD/HD in general education classrooms (DuPaul, Ervin, Hook, & McGoey, 1998). In the latter study, normally achieving students also showed improvements in attention and academic performance when participating in CWPT. Thus, peer tutoring is an intervention that can be implemented to help *all* students and, thus, offers a practical and time-efficient strategy for meeting the needs of children with attention problems.

There appears to be a variety of ways that computers can be used to enhance the academic achievement of all students, not just those with attention problems. Specifically, computers can promote the initial acquisition of skills through the use of instructional technology and can enhance the mastery of already acquired skills via drill-and-practice software. Some initial research (e.g., Ota & DuPaul, 2000) has provided support for the latter utility by demonstrating increases in the on-task and work productivity of students with AD/HD using computer-assisted instruction (CAI). The instructional features of CAI help students to focus their attention on academic stimuli. Although not always the case, CAI presents activities incorporating specific instructional objectives, provides highlighting of essential material (e.g., large print, and color), utilizes multiple sensory modalities, divides content material into smaller bits of information, and provides immediate feedback about response accuracy. In addition, CAI limits the presentation of nonessential features that may be distracting (e.g., sound effects and animation). More research is needed to determine the uses of specific software to enhance concentration and academic performance among students with attention problems.

Another proactive strategy is choice-making where a student is allowed to choose activities from two or more concurrently presented stimuli. Recent studies have demonstrated the value of providing task-related choices to students with behavior difficulties, including AD/HD, in that on-task behavior and work productivity can increase under choice conditions (e.g., Dunlap et al., 1994). Choice-making typically is implemented by providing a student with a menu of potential tasks in a particular academic subject area from which to choose. For example, if the student is having difficulty attending to independent math work, the child would be presented with several possible math assignments to complete. The child would be expected to choose and complete one of the tasks listed on the menu during the allotted time period. Thus, the student is provided with some control over the specific assignment, while the teacher retains control over the general nature of the assigned work.

Unfortunately, few proactive strategies have been developed specifically for secondary school students with attention difficulties and AD/HD. Adolescents with AD/HD may exhibit inferior organization and study skills, thereby increasing the risk for poor scholastic achievement (Barkley, 1998). Thus, secondary school students with attention problems may benefit from instruction and support in taking organized notes for later study. For example, the Directed Notetaking Activity (DNA; Spires & Stone, 1989) involves teacher-instructed lectures and prompts in an attempt to increase students' on-task behavior, improve comprehension of classroom materials, and reduce the frequency of disruptive behaviors. Specifically, the teacher instructs the students on the notetaking process by illustrating how to outline notes based on main ideas and details. The number of teacher prompts is slowly faded until students are able to independently form an outline based on the presented lecture material. The DNA program has been found to increase the quality of notes and the recording of instructional details by adolescents diagnosed with AD/HD (Evans, Pelham, & Grudberg, 1995). In addition, this procedure led to significant improvements in the classroom on-task behavior and daily academic performance of these students. This study is a good demonstration of the positive relation between enhanced academic skills and appropriate classroom behavior. Thus, targeting an academic skill, such as notetaking, may indirectly lead to improved classroom behavior on the part of students with attention difficulties.

PROACTIVE INTERVENTIONS FOCUSING ON SOCIAL BEHAVIOR

Proactive strategies also can be used to enhance social behavior in situations when a specific student has been known to exhibit inattention and/or disruptive behavior. Two examples of interventions designed to prevent classroom behavior difficulties include active teaching of classroom or school rules and altering the structure of the classroom environment.

The degree to which teachers provide cues, prompts, or signals to follow classroom rules ultimately determines the success of those rules in maintaining appropriate student behavior (Paine, Radicchi, Rosellini, Deutchman, & Darch, 1983). Unfortunately, many elementary school-aged children do not fully understand classroom rules presumably because these are not taught to them with clarity and consistency. Not surprisingly, children with attention difficulties and AD/HD are among the students least likely to follow classroom rules. Thus, teachers should be encouraged to go back to basics by actively teaching rules to *all students* throughout the school year. Specifically, teachers should

1. Remind students of classroom rules and actively teach rules by discussion and pointing out examples of children following them (i.e., "catch" students following rules).
2. Maintain eye contact with students as instruction or other activities are in progress.
3. Remind students about expected behaviors *before* the start of the activity not *after* a rule has been broken.
4. Circulate throughout the classroom to monitor student behavior and provide feedback in an unobtrusive fashion.
5. Use nonverbal cues and signals to redirect a student while teaching others.
6. Maintain a brisk pace of instruction.
7. Ensure academic and nonacademic routines are well understood by students.
8. Frequently communicate their expectations about use of class time in a clear manner.

In addition to active teaching of classroom rules, teachers working with children who exhibit significant attention difficulties and AD/HD-related behaviors should consider altering the classroom environment to allow for more careful monitoring of student activities. For example, placing a student's desk near the teacher's may allow easier observation of the student's behaviors and enhance the probability that the student will understand teacher directives (Paine et al., 1983). Teachers also should be encouraged to arrange the classroom so that students with attention problems are more likely to participate in class activities while not restricting opportunities to learn and benefit from instruction. For example, students with attention problems may sometimes be placed in isolated parts of the classroom to decrease potential distractions for the child. Although this can be a successful move, it is important that the student remain accessible to teacher instruction and other class activities.

Reactive Interventions

Reactive intervention strategies typically focus on providing consequences for problem behavior. These strategies often are used on an individual, rather than a class-wide, basis. Individually tailored strategies can help to minimize the impact of disruptive behavior on a classroom, reduce the frequency of negative interactions between the student and the teacher, and teach the child a more appropriate way to get attention from the teacher. The goal of these strategies is to provide an environment that enhances the student's ability to focus on learning and minimizes the rewards for disruptive behavior. These interventions should be designed to fit the needs of the student by changing the conditions that maintain the problem behavior. All children will not respond in the same way to the implementation of these strategies.

FUNCTIONAL ASSESSMENT-LINKED STRATEGIES

Functional assessment strategies are interviews, observations, and environmental manipulations (e.g., changing a seating arrangement) intended to identify environmental variables that reliably precede or reliably follow problem behaviors of concern. Such variables are then hypothesized, in a behavior analytic formulation, to prompt or promote the occurrence of problem behavior, in the case of preceding variables. And in the case of variables reliably following problem behavior, these are hypothesized to reinforce or maintain problem behavior (see Nelson, Roberts, & Smith, 1998).

Understanding the factors that maintain the problem behaviors, along with the situations that appear to set the stage for those behaviors, is an essential first step in planning successful interventions (DuPaul, Eckert, & McGoey, 1997). For example, consider a target student's out-of-seat behavior that is reliably occasioned by the teacher's presentation of a class-wide, in-seat math work assignment. In this instance one potential intervention could involve provision of teacher assistance at the beginning of that assignment to ensure that directions are understood, the student has all necessary materials, and the student is able to independently complete the work assigned. This would be a preventive or proactive strategy.

Alternatively, consider the same student and behavior but a different formulation of the problem. In this instance, suppose the student's out-of-seat behavior reliably results in teacher attention (e.g., "Allen, do you need help with your math work? Let me see what you are doing."). Here it would be hypothesized that Allen's out-of-seat behavior is being reinforced through teacher-delivered social attention. At least one component of a "functional" approach to intervention would include behavior management strategies intended to strengthen an alternative behavior that would produce the same type of reinforcement—in this case teacher attention. For example, the teacher might use a strategy that included providing attention contingent upon Allen's being in his seat, and/or working on math assignments, and withholding attention when out-of-seat behavior occurs.

In a representative study, Ervin, DuPaul, Kern, and Friman (1998) used functional assessment strategies to guide the development of classroom-based interventions for four adolescents diagnosed with AD/HD. For two of these students, the interventions used were linked to problems hypothesized to serve the functions of escape from written tasks for one student, and access to peer attention for another student. Results of this work suggested that the classroom interventions based on functional assessment strategies resulted in significant improvements in the behavior of both students.

RESPONSE COST

Token reinforcement is a commonly used strategy in which students earn points for meeting behavioral expectations, and the points can be exchanged for privileges. One example of this type of strategy is response cost, a type of token economy system. In this system, students earn tokens based on positive classroom behavior and lose them for inappropriate behavior. Response cost systems require planning and clear communication at the outset. The rules of the system should be taught and reviewed on an ongoing basis. The student should understand when the system will be used, how points may be gained or lost, what privileges are available in exchange for points, and when points may be turned in for privileges. It may be useful to check which privilege a student is working toward before beginning an activity, and to intermittently change the available privileges in order to maintain student interest.

It is essential that the student helps to create the list of possible privileges in this system and gains privileges on a regular basis. Electronic versions of response cost, such as the Attention Training System (ATS; Rapport, 1987) allow the teacher to respond to inappropriate behavior on the part of one child while continuing to work with other children or the whole class. This electronic system is made up of a student module, which sits on the student's desk, and a teacher module. The student automatically accumulates points as he or she works independently or in a group. When the teacher notices off-task or disruptive behavior, then points are easily deducted. This provides immediate feedback on student behavior without interrupting classroom activities or instruction.

A manual version of response cost uses numbered cards held together by a binder ring. The teacher adds and subtracts points by changing the top card on her set of cards as the child demonstrates appropriate or inappropriate behavior. As the teacher changes cards, the student changes the number of points on his or her set of cards to match the teacher's set. These strategies provide the student with frequent and immediate feedback on performance, which is an important factor in helping children with AD/HD meet the behavioral expectations of the classroom. This immediate communication of positive or corrective feedback helps to improve student outcomes in the areas of behavior and classroom achievement. Several studies have supported the use of response cost strategies for children with attention problems associated with AD/HD (see Barkley, 1998).

TIME-OUT FROM POSITIVE REINFORCEMENT

Time-out from positive reinforcement is another reactive strategy that can help to minimize problem behaviors in the classroom. This strategy can be used as an effective response to difficult behaviors, but must be applied according to careful guidelines. The teacher or school psychologist should note whether the use of this strategy results in reduced, rather than increased, rates of problem behavior. Continuing use of this strategy can cause the child to miss instruction on a regular basis, which can lead to academic problems. Guidelines in using this strategy include ensuring that the time-out period is brief (i.e., less than 10 minutes) and that it occurs immediately after the problem behavior. It also is essential that there be a reinforcing environment from which the child can be removed. If the environment is not stimulating and interesting to the child, then behavior that results in removal from the environment may increase. If the child's behavior is designed to provoke a response that will allow him or her to escape from or avoid a particular task or situation, then receiving a time-out from the classroom or task may reinforce the behavior.

PARENTS AS INTERVENTION AGENTS

Other effective strategies that can help improve student performance in the classroom are mediated by parents. Educators can provide an important service to parents of a child with AD/HD by clearly communicating school expectations and by teaching strategies that can be used by parents to promote academic success. Systematic ongoing communication is needed between the parents and teachers in order for parents to effectively support their child's academic performance. Designing a system to support ongoing communication is important, whether it consists of notes sent home on a daily or weekly basis, weekly check-in phone calls or e-mail, brief conversations when a child is picked up after school, or some other system that fits the particular family and school. Maintaining communication allows parents to hear about their child's struggles and successes in school, to communicate about home issues that may be influencing classroom performance, and to build a partnership with teachers with a goal of improving their child's ability to succeed in school.

CONTINGENCY CONTRACTING

Home-based reinforcement programs can help to strengthen school-based behavior management systems by allowing the child to earn privileges at home based on positive school behavior. Effective home-based programs require ongoing communication between the teacher and parents; this can be accomplished through the use of a daily note or report that is sent home with the student (Pelham & Waschbusch, 1999). Parents and teachers can negotiate a contingency contract, which specifies the academic performance and classroom behavior that is expected and the privileges that can be earned at home if the child successfully demonstrates the behaviors. This type of contract is most likely to be successful if privileges can be earned each day, rather than on a weekly basis. Long-term success is built on small successes right from the start, so choosing criteria that the child is easily able to meet at the beginning while slowly building up to more challenging goals is an important feature of the contingency contract.

One study of the use of school-home notes with a preschooler with AD/HD showed that classroom on-task behavior increased contingent on home-based reinforcement (McCain & Kelley, 1993). In this study, the preschooler was allowed to color in a happy face on his school-home note when he completed a predetermined amount of time engaged in a task. Eventually, the child was able to set his own timer, engage in the task, then color in the happy face if he had stayed on-task for the full time. In addition, the preschool teacher circled happy, sad, or neutral faces on the school-home note at the end of various activities to provide feedback to the child and his parents about his success in meeting several target behaviors throughout the day. One drawback of home-school notes may be that the success of the system depends on the delivery of the notes, which is usually the responsibility of the child. In the case of a child with AD/HD, home-school communication may be more consistent and accurate if it takes place directly between the teacher and parents. The most effective method of communication should be determined on a case-by-case basis.

SELF-MANAGEMENT

A more advanced type of strategy to improve classroom behavior involves self-directed activities that require children to monitor and/or evaluate their own behavior over time. The aspects of a self-management system most likely to actually be managed by the student include observing and evaluating behavior, while the task of identifying problem behaviors and goals is more likely to be done by adults (Fantuzzo & Polite, 1990). Further, interventions with a stronger self-management component may be more effective than those that are managed for the most part by the teacher. When developing interventions that include self-management components, it may be useful to clearly identify which aspects will be teacher-controlled and which will be managed by the student, and to make decisions about these based on the individual student's needs and abilities.

A self-evaluation system generally allows a student to earn points that can be used for privileges (e.g., Rhode, Morgan, & Young, 1983). The teacher clearly identifies the target behaviors and academic performance expected, and provides a written rating scale that states the performance criteria for each rating. The teacher and the student separately rate student behavior during an activity. At the end of the activity or time period, the teacher and student compare ratings. If they match exactly, then the student keeps all points and earns a bonus point. If the student rating is within one point of the teacher rating, then the student keeps his or her points. If the student rating is more than one point away from the teacher ratings, then the student does not receive points for the activity. Eventually, the close teacher involvement is faded, and the student becomes responsible for monitoring his or her own behavior.

Children with AD/HD often lack the skill to be accurate judges of their own behavior. Because they may have a tendency toward recalling their positive behaviors and not recognizing the problem behaviors that affect their ratings, a brief discussion or reminder of the behaviors that led to a lower rating may be useful (Hinshaw & Melnick, 1992). Setting up a self-management system in a classroom involves training the child with AD/HD in the system, providing clear descriptions of the expected behaviors, and drawing up a list of privileges the student would like to earn. The goal of such a system is to eventually train the child to monitor his or her own behavior in the classroom, without constant feedback from the teacher.

SUMMARY

Children with attention problems and/or AD/HD experience myriad academic and social difficulties that are not fully addressed by stimulant medication (i.e., the most common treatment for this disorder). A balanced intervention approach incorporating both proactive and reactive strategies appears optimal for comprehensively addressing the needs of students with attention problems. Several principles should guide intervention design with this population. First, intervention planning should be linked directly to assessment data (e.g., functional behavioral assessment and CBM). Second, a consultative problem-solving process (Krarochwill & Bergan, 1990) should be used to design and modify interventions. Next, maximum treatment effects will be obtained when intervention is implemented at the "point of performance." Fourth, intervention procedures are not written in stone but evolve and are modified on the basis of ongoing assessment data. Fifth, school psychologists must go beyond "train and hope" work with teachers and students to promote generalization and maintenance of behavior change over time and across settings. Specifically, it is insufficient to provide training without appropriate follow-up activities (e.g., modeling, feedback, and ongoing consultation). Sixth, interventions for children with attention problems should not place the entire onus on the classroom teacher. Rather, school psychologists should look to other possible intervention mediators (e.g., peers, parents, and the students, themselves), whenever possible. Finally, one must remember that all behavior serves a purpose, even actions that adults view as inattentive. Thus, whenever possible, interventions should replace inattentive behaviors with functionally equivalent actions that are appropriate for the classroom.

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71 Best Practices in the Assessment of Children With Attention Deficit/Hyperactivity Disorder: Linking Assessment to Intervention

Kathryn E. Hoff
Karla Doepke
Steven Landau
Illinois State University

OVERVIEW

Since the publication of our previous edition chapter (Landau & Burcham, 1995), there have been remarkable professional-practice changes regarding children with Attention-Deficit/Hyperactivity Disorder (ADHD). ADHD is not only the most prevalent disorder of children, involving 3–5% of the school-age population (American Psychiatric Association, 1994), it has also been the focus of more scientific inquiry than any other childhood disorder. As such, new information has appeared at a rapid rate, and there have been many significant changes over the past 10 years that impact the identification of these children. In this chapter we will first discuss the evolving nomenclature and diagnostic/assessment practices that apply to children with ADHD, followed by a brief review of characteristics associated with ADHD. Next, we shall discuss recent important areas of change that impact assessment and intervention with this population, such as increase in medication usage, legal mandates related to ADHD assessment, and the ascension of "functional assessment" in school psychology. Finally, because school psychologists are being called upon to address the multiple needs of children with ADHD, a framework is presented that provides for accurate assessment that can be linked directly to designing effective interventions.

Psychiatric Classification of ADHD

One of the more perplexing issues confronting professionals working with children who present symptoms of ADHD involves confusion (especially in the lay community) resulting from ever-changing diagnostic labels used to denote the disorder (e.g., "My son doesn't have ADHD; he's got ADD!"). Many factors account for this misunderstanding, including extensive albeit misleading ADHD-related discourse in the popular press and Internet. In any case, the most likely explanation for these nomenclature changes relates to improved understanding of the disorder. Historically, ADHD has been portrayed by various diagnostic labels, each one emphasizing differences in hallmark symptoms and inferred loci of the problem.

With the second edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-II*; American Psychiatric Association, 1968), the field focused on hyperkinesias (i.e., motor excess) as the defining characteristic of the disorder. Thus, these children were considered hyperactive and the disorder became officially known as Hyperkinetic Reaction of Childhood. However, with the time of the publication of *DSM-III* (American Psychiatric Association, 1980), an entirely different perspective of the disorder emerged. Now, a severe deficit in the child's ability to attend was central to the diagnosis instead of the singularly required hyperactive symptoms. The disorder was known as Attention Deficit Disorder (ADD), and subtypes of ADD included ADD/H (with hyperactivity) and ADD/WO (without hyperactivity). Thus, among children with clinically significant attentional problems, it was not necessary to present major- and minor-motor symptoms, such as "always on the go," "squirmy and fidgety," "can't sit still," and "hums and makes other odd noises" to be diagnosed with ADD. Additionally, *DSM-III* recognized that stage-of-development and age of onset were central to diagnostic practices, with ADD requiring a childhood onset.

In spite of the growing recognition of the legitimacy of this new ADD perspective (see Milich, Ballentine, & Lyman, in press), the publication of *DSM-III-R* in 1987 (American Psychiatric Association, 1987) perplexed many by returning to a "polythetic" (Landau, Milich, & Widiger, 1991) criteria set. Subtyping of the disorder was no longer prescribed for classification. Instead, children with ADHD earned a diagnosis by meeting 8 or more of *any* 14 symptoms in the set. The number of symptom combinations was considerable. In the context of *DSM-III-R*, it would be possible to have an ADHD diagnosis in the *absence* of significant attentional difficulties (a questionable assumption based on factor analytic data). The disorder was known as Attention-Deficit/Hyperactivity Disorder, making ADD an anachronistic label as of 1987. Because of this polythetic classification approach, extensive heterogeneity in the symptom pictures of children with ADHD led to difficulties in clinical practice. Indeed, assessment, diagnostic, and treatment protocols that seemed appropriate for many children with ADHD were inappropriate for others.

The current psychiatric taxonomy was introduced in 1994 with the publication of *DSM-IV* (American Psychiatric Association, 1994). In this edition, the label itself remained the same (i.e., ADHD), but there was a return to the subtyping approach described in *DSM-III*. Specifically, children could now be diagnosed as having ADHD-Predominantly Inattentive Type, a disorder that approximates ADD/WO in *DSM-III*. This designation should be applied to those who are easily distracted by irrelevant stimuli and fail to sustain attention, have organizational difficulties and seem forgetful, and appear sluggish. However, by definition, they do not have significant problems with hyperactive and impulsive behaviors. Many of these Inattention criteria pertain directly to the child's performance in school. In addition, children with ADHD-Predominantly Hyperactive/Impulsive Type are diagnosed if they meet a series of acting-out criteria such as "often on the go and acts as driven by a motor," "talks excessively," "fidgets with hands or feet," and "has difficulty awaiting turn." Children in this category do not have significant problems with their attending behavior. Interestingly, both anecdotal and empirical support for this type of ADHD is quite limited (see Milich et al., in press, for a review). Third, children who present a symptom picture that transcends both the Inattentive criteria set and the Hyperactive/Impulsive set are diagnosed as having ADHD-Combined Type (similar to ADD/H in *DSM-III*). Regardless of which subtype is classified, *DSM-IV* also requires documentation that the child's impairment was evident before the age of 7, and that it significantly affected functioning in two or more settings (e.g., home and school).

The Empirical Approach to Classification

By virtue of its subtypic perspective, the *DSM-IV* conceptualization of ADHD reflects a multidimensional or two-factor view of the disorder. In other words, and in contrast to earlier belief (e.g., *DSM-III-R*), factor and cluster analytic studies indicate that symptoms of inattention, hyperactivity, and impulsivity do not necessarily co-occur in samples of children. Although a review of these results is well beyond the scope of this chapter, there are numerous demonstrations (e.g., Lahey, Carlson, & Frick, 1997) that two distinct dimensions, representing symptoms of inattention and hyperactivity/impulsivity, emerge using quantitative methods. Thus, most empirical approaches to the classification of ADHD support the distinction between children whose primary problems reflect inattention and disorganization (i.e., ADHD-Inattentive Type) versus those with symptoms of inattention *as well as* hyperactivity/impulsivity (i.e., ADHD-Combined Type). Results of this empirically derived two-factor conception of ADHD were supported in prepublication field trials of *DSM-IV* (see Frick et al., 1994), indicating that the two ADHD disorders are discrete and unrelated.

The Two ADHD Disorders

INATTENTION

When examining the actual *DSM-IV* diagnostic criteria for ADHD, it is easy to infer that the symptoms of impaired attention are the same for both Predominantly-Inattentive and Combined subtypes. As such, referred children in either group will have similar symptoms of attentional difficulties, but those in the Combined group will also have problems with hyperactive/impulsive behaviors. Unfortunately, as suggested by Milich et al. (in press), this may not be the case. Even though there have been few investigations designed to examine differences in the topography of inattention as a function of subtype assignment, data indicate children in the two subtypes may differ in their inattention difficulties. Specifically, a sluggish cognitive tempo, paired with slow moving response style, plus drowsiness and lethargy, seem to characterize those in the Predominantly Inattentive group. In addition, these children may have higher scores on Internalizing symptoms and disorders. Unfortunately, this pattern is not without ambiguity. According to Milich et al. (in press), it is possible that those receiving a Predominantly-Inattentive diagnosis also have an insufficient or sub-threshold number of serious hyperactive/impulsive symptoms. As such, the group of Inattentive children may be significantly more heterogeneous than intended by *DSM-IV* diagnostic criteria. In contrast, children in the Combined group seem more likely to have inattention problems such as being distractible, disorganized, irresponsible, sloppy, and intrusive to the classroom environment. Rating scale data indicate they are more likely to present Externalizing characteristics. Given the fact that *DSM* sought to invoke the same Inattention diagnostic criteria for both subtypes, and the paucity of laboratory and observation studies about subtypical inattention differences, it is not surprising that definitive conclusions about the inattention construct have failed to emerge (Milich et al., in press).

HYPERACTIVITY/IMPULSIVITY

The symptoms of motor excess and impulsive responding have been associated with the disorder since its earliest descriptions. This Hyperactive/Impulsive cluster leads to disruptive behaviors in school, rule violations, and difficulty functioning in transitions (Landau & Milich, 1988). Indeed, most school psychologists could comfortably assert "I know it when I see it" when reflecting on the Hyperactive/Impulsive features of ADHD.

To better understand the nature of ADHD represented by hyperactivity/impulsive and inattentive behaviors, Barkley (1997, 1998) has presented an explanation in which all symptoms are attributed to a single phenomenon—known as behavioral disinhibition. According to his theory, the daily demands of academic and social settings place high premium on the child's ability to suppress or delay a response. However, children with ADHD are not able to *inhibit* their behavior at a rate commensurate with agemates. Additionally, Barkley argues that children with ADHD experience difficulties in executive functioning that interfere with working memory, internalization of speech, self-regulation of affect and arousal, and reconstitution (i.e., the ability to rapidly analyze and reconstruct parts of language to constitute meaningful communicative speech). According to his theory, this combination of deficits best explains the syndromal picture of children with ADHD. It should be noted, however, that Barkley has systematically excluded from consideration those with Predominantly Inattentive Type. In his opinion, these children represent a distinct disorder that deserves other explanations.

Although a comprehensive discussion of Barkley's "unifying theory" is beyond the scope of this chapter, a few points are worth mentioning. First, Barkley's hypothesis regarding a deficient working memory is consistent with numerous anecdotal and empirical reports about children with ADHD who fail to efficiently and effectively execute lengthy sequences of goal-directed behavior. This deficiency may explain frequent teacher and parent complaints of forgetfulness, failure to follow direction, and noncompliance.

Second, Barkley (1997) focuses on the self-regulatory and metacognitive applications of language. In this context, language serves as a way for the child to communicate reflectively with self when plans of action are considered, acted out, and evaluated. This portion of his theory borrows heavily from the work of Vygotsky (1934/1987), who asserted that children use speech-to-self (i.e., private speech) as a problem-solving strategy to overcome cognitive challenges and respond to demands of self-regulation. Private speech is initially manifested as externalized thought spoken audibly. However, as children mature, their private speech becomes more internalized and less audible. Empirical investigations by Berk and Landau (1993) and Landau and Berk (2000) suggest that, although the private speech of children with ADHD follows the same maturational path as it does for children without the disorder, it shows a significant delay according to developmental norms. As such, children with ADHD who are expected to "sit quietly at your desk and do your math worksheets!" may be prevented by teachers to engage in a strategy that could be necessary for them (i.e., they may need to solve their problems out loud). Research data indicate that effective use of private speech strongly predicts attention-to-task and motor control (Landau & Berk, 2000).

The third component in Barkley's unifying theory pertains to the ability to self-regulate emotion, motivation, and arousal. According to Barkley (1997), children with ADHD present a significant delay in this ability. Recent data (Mangione & Landau, 2001) support Barkley's assumptions. Poor regulation of affect may also explain why many of these children become excited and distracted by impending rewards used in psychosocial interventions such that performance is disrupted. In the social domain as well, emotional arousal seems to be a contributing factor to the ubiquitous problem of disturbed peer relations (Landau et al., 1998).

The final deficit in executive functioning involves the process of reconstitution, the language-based ability to decompose a stimulus event and then reconstruct an appropriate response to the immediate episode. Verbal discourse, peer communications, story-telling and writing narratives, and the creation of alternative solutions exemplify activities that require reconstituted information (Barkley, 1997). Thus, children who show a delay in their ability to reconstitute events have difficulty developing efficient strategies and seem inflexible or less adaptable to changing environmental demands. For example, numerous anecdotal reports reveal children's difficulties negotiating transitions at school (e.g., returning from recess to quiet desk work quietly; traveling through the hall to go from class to the cafeteria). Additionally, empirical work in the area supports this notion (see, for example, Landau & Milich, 1988).

In the context of understanding the disinhibited characteristics of children with ADHD, the reader is encouraged to consider Barkley's (1997, 1998) unifying theory with several qualifying points in mind. First, as previously indicated, his comprehensive explanation is not applicable to those with ADHD-Predominantly Inattentive Type; these children do not have difficulties with behavioral disinhibition. Second, his theory seems to clarify the important distinction between *skill deficit* versus *performance deficit* as a way to understand the inappropriate behavior of these disinhibited children. Indeed, this distinction should be made regarding all referrals seen by school psychologists, as it is necessary for intervention planning. If children with ADHD experience a skill deficit, one would infer they lack the adaptive skills and knowledge necessary to function in age-appropriate fashion. As such, treatments should take on a skill-development focus (e.g., social skills training). However, if their problems are best explained as a performance deficit, we infer they have the requisite skills and "know how to behave" appropriately. In this latter case, they are simply unable to apply their skills efficiently and effectively in daily situations. Interventions should then focus on developing strategies to assist them in their application of skills already present. If Barkley is correct, and many empirical reports support this contention, then it would be unfair to argue that these children *could* behave properly "if only they tried harder." The final qualifying point to be made about Barkley's theory is it should be viewed as a scholarly guide for future research rather than an unequivocal and valid account of the disorder.

Associated Features

Children with ADHD commonly experience difficulties that go well beyond the *DSM* diagnostic criteria (Jensen, Martin, & Cantwell, 1997). Given the heterogeneity among children diagnosed with ADHD, it is understandable that not all of these children experience additional difficulties, and those who do represent an even more heterogeneous mix of symptoms and disorders. We strongly recommend that assessment of ADHD go well beyond the primary features of the disorder. It should also include a focus of comorbid problems.

CONDUCT PROBLEMS

The most obvious secondary problems include disorders of conduct, with many children with ADHD also meeting the special education eligibility criteria for

Emotionally Disturbed (ED). Although the rates of overlap vary across studies, ADHD is one of the earliest difficulties to co-occur with conduct disorder (CD), and at least one-half of all children with ADHD present comorbid oppositional-defiant and/or conduct disorder diagnoses (Loeber, Green, Lahey, Frick, & McBurnett, 2000). Thus, many can be extremely stubborn, noncompliant, and hostile, and may engage in rule violations, stealing, lying, and aggressive acts (Hinshaw, 1987). This is significant, as follow-up studies of comorbid children with ADHD and CD predict the perseverance of ADHD, and is associated with more serious adolescent and adult adjustment problems (Loeber et al., 2000).

SOCIAL CONCERNS

Many children with ADHD experience disturbed peer relations and are considered by others to be highly aversive playmates (Landau et al., 1998). Many of these children are bossy, loud, intrusive, domineering, disruptive, and easily frustrated while in play situations. Additionally, children with ADHD emit more argumentative statements, and display more explosiveness and defiance than children without ADHD (Barkley, 1998). To make matters worse, the negative reputation earned from exhibiting these behavioral clusters can be established after only brief contact with unfamiliar children (Pelham & Bender, 1982). Given these social interaction patterns, it is not surprising that as many as 50% of children with ADHD are frequently rejected by peers and encounter difficulties making and keeping friends (Landau et al., 1998). Peer rejection is a serious outcome for children with ADHD, as those who experience rejection early in life are known to be at high risk for aggression and delinquency, school maladjustment, later psychiatric disorders, plus adult outcome difficulties, including job dismissals, bad conduct discharge from the military, police contact and incarcerations, and psychiatric hospitalizations (Parker & Asher, 1987).

ACHIEVEMENT DIFFICULTIES

Children with ADHD are also at elevated risk for achievement difficulties, and many experience academic skill deficits or meet special education placement criteria as learning disabled (McGee & Share, 1988). Because children with ADHD in the classroom are typically off-task, noisy, disruptive, out-of-seat, and do not finish school work or homework, both parents and teachers complain of underachievement. Their school work can be highly inefficient and disorganized, and performance often shows great fluctuations. Consequently, there may be a grave discrepancy between actual achievement and the child's estimated potential for learning. To make matters worse, there is suggestive evidence that children with ADHD may score an average of one half to one full standard deviation below agemates on standardized tests of intelligence. Even though there are competing explanations for this discrepancy (see Barkley, 1998), there is reason to worry that these children do experience a delay in the development of some cognitive strategies (Whalen, 1989). Because of these academic difficulties, many of these children experience failure in school and grade retentions. This failure, in combination with their problem behaviors and tendency to alienate peers, places them at great risk for negative feedback from parents, teachers, and the peer group.

ADDITIONAL CONCERNS

It is little wonder that children with ADHD are also at risk for low self-esteem and depression as they mature, and therefore it is recommended that symptoms of internalizing disorders also be considered during the assessment process. It is worth noting that families of children with ADHD tend to exhibit higher levels of divorce, marital discord, and parent frustration than families without an ADHD child. Therefore, information on these specific family characteristics may provide the school psychologist with valuable information that guides the planning of intervention strategies. An evaluation of the family's strengths and weaknesses round out the assessment picture.

BASIC CONSIDERATIONS

Recent Events

MEDICATION

One change currently receiving considerable attention is the increase of school-based use of medications (e.g., methylphenidate or Ritalin®). Indeed, according to the American Association of Applied and Preventative Psychology, nearly 20 million prescriptions were written last year for the psychopharmacological treatment of ADHD, and various surveys reveal a six- to eight-fold increase in prescriptions during the 1990s. In addition, there is a dramatic increase in the number of preschool-age youngsters who are presently taking psychostimulant medication. Even though efficacy data are encouraging, Ritalin® does not have FDA approval for children under the age of 6, and no long-term safety data are available regarding methylphenidate effects on the developing neurological system of 3- and 4-year-olds. To exacerbate this problem, Campbell (1990) makes it clear that differential diagnoses for hard-to-manage preschool-age children are extremely elusive, leading to numerous false-positives.

Internet postings and the popular press have had a field day with these issues. There is widespread community concern about the cultural shift during the previous two decades regarding a willingness to medicate disruptive or disturbing children. Most school psychologists have had anecdotal experience regarding primary care physicians who have prescribed Ritalin® in the absence of data from school. In addition, we are becoming exposed to the increased comfort many teachers feel asserting, for example, in a parent conference setting "Henry has given me problems since the beginning of school. He won't sit still, constantly annoys other children, and never gets his work done. I really think it would be good for him to be on medication. Please discuss this with your pediatrician." Not surprisingly, the prospect that teachers could or should discuss medication with parents has received attention from some state legislatures. For example, in July 2001, the state of Connecticut enacted the first-in-the-nation law as a backlash to this practice and the apparent over-use of medication to treat these problems. This law prohibits teachers, counselors, and other school personnel (read: school psychologists) from suggesting psychiatric medications to any parent; the intention of the law is to ensure the *first* mention of drugs comes from a physician.

There have been several trends during the 1990s that may account, in part, for the increased use of these medications. According to Kotulak (2000), other psychiatric disorders exist with symptoms that mimic ADHD. Unfortunately, these tend to present to physicians at a much lower base rate (e.g., schizophrenia), leading to false diagnostic conclusions. Second, many professionals would be hard pressed to precisely define the difference between normal and age-appropriate overactive and rambunctious behavior from that indicative of ADHD. As previously indicated, this is a particularly vexing issue for those who work with preschool-age children. Is it the case the child presents clinically significant indicators of a veritable psychiatric disorder or does the mother's request for medication reveal parental intolerance of her high-energy youngster who is actually functioning within normal limits? Third, there is reason to worry that mandatory school-based learning standards adopted across the country have increased performance-focused pressure on educators. Certainly, students with ADHD encounter their own set of learning problems; however, ADHD also can interfere with the learning of others. In a climate of growing teacher accountability, ADHD in the classroom can present difficulties for many. Finally, the prominence of managed care during the 1990s reveals a preference for medication as a "treatment of choice." Insurance companies naturally prefer to authorize this easy, efficient, and inexpensive form of treatment over more time-consuming alternatives (Kotulak, 2000).

RECENT LEGAL ISSUES

School psychologists should be familiar with the recent changes in the Individuals with Disabilities Education Act Amendments (IDEA '97), and corresponding March 1999 IDEA regulations, especially in relation to an ADHD assessment. The final regulations now explicitly include ADHD under the list of *possible* chronic or acute health problems that may render a child eligible under the Other Health Impairment (OHI) category. This change was not intended to identify more children, but merely to codify the U.S. Department of Education's long-standing position that a child with ADHD may be eligible for special education and related services under the "OHI" designation (Analysis, pp. 12542–12543). However, the diagnosis of ADHD does not automatically entitle that child to receive special education services, nor is it necessary. Children with ADHD are still required to meet the two-pronged eligibility criteria to receive special education services under IDEA '97. First, the child must be identified as having a disability, under 1 of the 13 eligibility categories. If the child is not eligible under OHI, then the child may be eligible under another disability category, such as learning disability or emotional disturbance. The second criteria for receiving special education services is that the child must *need* special education and related services because of the disability. If a child does not qualify for services under IDEA '97, then the child still may be eligible for services under Section 504. Specifically, a child qualifies for services if he or she (a) has a disability that *substantially* limits one or more major life activities (e.g., walking, speaking, learning), (b) has a record or history of having such an impairment, and (c) is regarded as having such an impairment (Zirkel & Aleman, 2000). School psychologists are urged to read Telzrow and Tankersley (2000) or Zirkel and Aleman (2000) for more information regarding student eligibility of services under IDEA or Section 504.

Perhaps a more significant legal change put forth by the IDEA '97 is the required use of functional behavioral assessment (FBA) and positive behavioral interventions and supports. Although this change in law is not specific to students with ADHD, it does pertain to students with possible disabilities who exhibit problem behavior. For example, when a child with disabilities exhibits problem behavior that impedes his or her learning or the learning of others, or if the child's inappropriate behavior is repetitive or anticipated to re-occur, the student's Indivudual Education Plan (IEP) team must address these behaviors with positive behavioral interventions, strategies, and supports. Additionally, IDEA '97 now details specific conditions that trigger conducting a mandatory functional behavioral assessment and completing a behavior intervention plan (e.g., on the eleventh cumulative day of a suspension or placement in an interim alternative educational setting §300.520(b)). The actual procedures required for conducting a FBA and behavior intervention plan are not defined in the regulations. For additional information on the legal issues surrounding functional behavioral assessments, readers are referred to Drasgow and Yell (2001).

FUNCTIONAL ASSESSMENTS

Numerous experts in the field recently have promoted the use of functional assessment methodologies for assessment and intervention of ADHD and ADHD-related behaviors. In general, functional assessment refers to a range of procedures used to identify functional relationships between the occurrence or nonoccurrence of a behavior, and environmental variables that contribute to the development and maintenance of that behavior. To identify these associations, functional assessment procedures incorporate multiple assessment strategies from a variety of sources, including interviews, rating scales, and direct observations (e.g., Dunlap et al., 1993; O'Neill et al., 1997). Functional assessment extends our assessment methodologies by determining *why* the problem behavior occurs (identifying cause-effect relations) rather than *what* the problem behavior looks like. For a more detailed discussion and description of functional assessment, readers are encouraged to look at several excellent sources for additional information (e.g., DuPaul, Eckert, & McGoey, 1997; Knoster & McCurdy, this volume; Watson, Gresham, & Skinner, 2001).

There are distinct advantages to incorporating functional assessment methods and procedures. First, as mentioned above, functional assessments are now required by mandates in the IDEA 1997 Amendments. Second, best practice requires school psychologists employ assessment techniques that can be directly linked to subsequent interventions. Interventions that are linked to assessment data have a greater likelihood of producing lasting behavior change that is maintained across situations and over time. Additionally, assessment-driven interventions are potentially more cost and time effective than using a trial and error approach to intervention selection, which may enhance treatment acceptability and integrity. Third, functional assessment methods and procedures facilitate individualized interventions (e.g., DuPaul & Ervin, 1996). Because of the extreme heterogeneity among children with ADHD, a mere diagnosis of the disorder has no implications for treatment selection. Specifically, the functions of the ADHD-like behaviors (topography) will vary considerably across students. A functional assessment, or determining *why* a problem behavior occurs, provides invaluable intervention information in a world where "one size does not fit all" (DuPaul et al., 1997). Finally, functional assessment utilizes a problem-solving framework and represents a flexible assessment strategy that school psychologists should use. Although it would be premature to dictate a "best practices in functional assessment" for school psychologists (e.g., Ervin et al., 2001), its methods and procedures can be easily incorporated into the consultative problem-solving paradigm of Bergan and Kratochwill (1990), a model we will describe. As Gresham, Watson, and Skinner (2001) note, "Functional behavioral assessment belongs in the armamentarium of school psychologists."

Developmental Perspective

Although a developmental approach to assessment is not new, there are increasing numbers of preschoolers and older youth referred for ADHD evaluations. When assessing ADHD, determinations of problem behaviors should be based upon knowledge of developmental norms (i.e., the child was found to behave in age-inappropriate fashion). Without such a perspective, psychologists are at risk of over identifying attention and activity problems among preschool-age children (Hinshaw et al., 1992). Alternatively, ADHD-related behaviors may be under identified among adolescents due to the covert nature of problems in this age group (Barkley, 1998). Thus, the school psychologist must have a sound knowledge of normative or age-appropriate behavior. To determine whether a problem exists, school psychologists need to examine both the frequency and intensity of the problem behavior, and consider whether the problem is typical for a given age group and the problematic environment. It is critical to use assessment procedures that include components with adequate normative data (e.g., norms broken down by age and gender). Further, methods should have high test—retest reliability to help determine whether the problem is merely a transient phenomenon or a more chronic concern. Ultimately, a developmental perspective provides relevant and realistic goals for the intervention plan (i.e., the child will be expected to behave in age-appropriate ways).

BEST PRACTICES

Before undertaking the assessment process, the school psychologist needs to consider the primary goals of the specific evaluation. General purposes of assessment include classification, placement, intervention planning, and intervention evaluation.

Assessment for Classification Purposes

Despite its strong educational impact, ADHD is currently conceptualized as a psychiatric disorder. Family physicians, pediatricians, psychiatrists, and other mental health professionals use the psychiatric taxonomy found in the *DSM-IV* (American Psychiatric Association, 1994). Although simply naming the disorder does not inform intervention efforts, classification may be needed to qualify for treatment services outside the school (medication, parent training, and clinic-based therapy). A school psychologist is in an optimal position to communicate with outside professionals about the child, and thus it is important to know about the terminology and *DSM* requirements. In an assessment for diagnostic purposes, school psychologists should determine whether the child meets the *DSM-IV* criteria for ADHD and rule out other factors or problems that could account for ADHD-like behaviors. Example questions to guide the assessment process include: Does the child exhibit a significant number of ADHD symptoms to meet *DSM-IV* criteria? Did the child exhibit ADHD symptoms prior to age 7, and are these behaviors present across multiple situations? Is the child's functioning significantly impaired in the home, school, or with peers? Are there other factors that may account for the display of ADHD symptoms and behaviors (DuPaul & Stoner, 1994)? Since the focus of this chapter is on linking assessment to effective intervention strategies, the reader is referred to Barkley (1998) or DuPaul and Stoner (1994) for a more complete review of diagnostic assessment.

A second purpose of classification is for placement in school-based services such as special education, and the IDEA and Section 504 supply the foundation for identifying our responsibilities for proper school-based assessment of children with ADHD. The assessment objective for school psychologists is to determine the extent to which attentional and/or hyperactive/impulsive problems are interfering with the child's academic, affective, and social needs. For example, does the child meet the eligibility criteria for a child with a disability? Does the child *need* special education and related services because of his or her disability (e.g., is educational performance significantly affected)? Does the child's disability significantly affect a major life activity, such as learning?

Assessment for Intervention and Evaluation: A Problem-Solving Paradigm

As described in our earlier chapter (Landau & Burcham, 1995), the consultative model of Bergan and

Kratochwill (1990) offers a useful problem-solving paradigm that can be translated into a flexible and dynamic assessment strategy to be directly linked to intervention planning and implementation. Thinking in terms of problem identification, problem analysis, plan implementation, and problem evaluation, school psychologists can collaborate with parents, school personnel, and community professionals to address the needs of children with ADHD. In this way, assessment is extended well beyond classification, and becomes, instead, an on-going, problem-solving process.

Problem Identification

Regardless of whether the referral concern is behavioral, social, or academic, an essential first step is to operationally define (using observable and measurable terms) the problem behavior(s) of concern. For example, concerns may include looking away from the teacher or classroom materials for more than 3 seconds, talking out, touching peers' materials, taking peers' materials, inappropriate noises, throwing things into the air, or getting out of the seat. Likewise, it is also important to define an appropriate replacement behavior, so that the focus of intervention is related to building a desirable behavior rather than solely diminishing an undesirable one. For example, on-task behavior may include 75% work completion or talking to a teacher or peer about the assigned material.

Gathering data from multiple informants can elicit valuable information across situations, help determine precisely which behaviors evoke concern from various significant others, validate the problem, and prioritize areas of concern. Parent, teacher, and child interviews, as well as omnibus rating scales completed by these informants, represent excellent strategies to accomplish this. Additionally, direct observation yields on-line representations of how a child is functioning in various school settings relative to age-mates. Sample questions school psychologists can ask during this stage of the assessment process include: What is the operational definition of the problem behavior and appropriate replacement behavior? How severe is the problem behavior? What percentage of time does the child exhibit off-task behavior? Is the problem validated when comparing targeted behavior to normative behavior of peers?

Problem Analysis

During the problem analysis stage, the school psychologist identifies variables that permit attainment of the problem solution, and develops an intervention plan to meet the stated objectives. Information is gathered and analyzed to determine why a particular behavior is occurring (i.e., its function) and to identify variables related to the problem at hand. By conducting a thorough problem analysis, school psychologists can better design and implement interventions that are matched to the situation (e.g., student ability level or classroom setting). During this phase, there are two major foci of the assessment process. First, the child's present abilities and problem behaviors are analyzed to determine if the concerns are due to a skill deficit or a performance deficit. In this case, individual psychoeducational testing may be warranted—both traditional norm-referenced and nontraditional curriculum-based measures.

Second, after problem behaviors have been operationally defined, the school psychologist continues to gather information from a variety of sources (e.g., structured teacher and student interviews, rating scales, direct observations) to identify environmental variables related to the inception and maintenance of the ADHD-related behaviors (O'Neil et al., 1997). That is, antecedents (e.g., task difficulty, teacher direction, student fight on the bus), consequences (e.g., peer attention, escape from a difficult task), and other environmental variables surrounding the problem behavior(s) (e.g., life stressors, setting events, medication, illness) would be analyzed to determine *why* the problem is occurring. For this purpose, further interviewing of teachers and parents about relevant events (e.g., the nature and timing of eliciting stimuli surrounding the presentation of inappropriate behavior) would be conducted. The reader is referred to O'Neil et al. (1997) and Witt, Daly, and Noell (2000) for some useful interviewing formats.

Additionally, direct observations in the natural setting should be conducted to precisely determine environmental contingencies (i.e., to analyze the ADHD behaviors in relation to antecedent and consequent events). School psychologists should also consider other ecological or contextual factors that may contribute to the development and maintenance of ADHD behaviors. For example, a child may be preoccupied in the classroom (and look inattentive) if the child's parents are getting a divorce or if the child is taking an excessive dose of medication. Additionally, the student may be receiving a higher level of reinforcement for engaging in misbehavior than appropriate behavior.

Once the school psychologist has obtained a sufficient amount of information from a variety of sources related to the onset and maintenance of the problem behavior, the school psychologist should generate hypotheses regarding the functions(s) of the target behaviors. In many cases, it may be difficult to determine why the behavior occurs. Thus, problem analysis is a "cyclical and continuous" process and additional data may be needed to confirm or disconfirm hypothesized functions of behavior (Larson & Maag, 1998). For example, a possible function may be to escape or avoid effortful or challenging tasks, such as difficult math problems or working in a group. A second function may include gaining access to either teacher or peer attention. Common examples may include verbal or nonverbal reactions such as laughter, smiling, or a thumbs-up sign from the student's classmates (DuPaul & Hoff, 1998).

In the case of clear hypotheses, one could move to the next steps in the problem-solving process. By implementing and evaluating an intervention that is *matched* to the behavioral function, school psychologists can infer the operant functions of the behavior (Dunlap et al., 1993). In more complex cases, or situations in which intervention strategies have failed, school psychologists may wish to experimentally test their hypothesis to demonstrate a functional relationship between environmental events and the target behavior (i.e., a functional analysis; FA). The reader is referred to functional analysis resources for specific steps and procedures for this (e.g., Gresham et al., 2001; Knoster & McCurdy, this volume; O'Neill et al., 1997; Sterling-Turner, Robinson, & Wilczynski, 2001; or Witt et al., 2000, for examples of FA methods procedures).

After reviewing data obtained through earlier stages of problem analysis, a specific intervention (optimally based on the functions of the target behavior) should be designed. There are a number of empirically documented intervention strategies for students with ADHD, and the reader is encouraged to consult DuPaul and Stoner (this volume) for more specific information. Sample questions school psychologists could ask during problem analysis are: What are the child's strengths and weaknesses? Is the problem behavior due to a skill deficit (student lacks skills) or performance deficit (student has skills but cannot apply these efficiently and effectively)? What are the situations in which the behavior is most likely and least likely to occur? For example, is the behavior related to a specific time of day (e.g., morning or afternoon), setting (e.g., playground or math class), persons in the environment (e.g., the presence of certain teachers, peers, or siblings), or an activity (e.g., small group instruction or independent seatwork)? What happens immediately before and after the occurrence of the behavior? Have factors, such as major life events or medical conditions that may contribute to the problem behavior, been considered? What are the hypotheses about the purpose or function of the behavior, and what evidence is there to support these hypotheses? What are the objectives for the intervention? What are the optimal intervention strategies? Have the specific steps of the intervention been delineated? For example, where and when is the intervention to be implemented? Who is responsible for implementing the intervention (Ervin, 2001)?

Plan Implementation

During the plan implementation stage, the role of assessment is to ensure the intervention protocol is being implemented as planned, and to permit sensitivity to unintended consequences of the intervention. Thus, for example, child or consultee (i.e., a parent or teacher) behavior should be monitored for the purpose of establishing treatment integrity. Additionally, if the child with ADHD is to receive psychopharmacological treatment in school, a checklist or rating scale designed to assess treatment-emergent symptoms (i.e., medication side-effects) should be used. During this stage, school psychologists may ask: Is the intervention being implemented as planned? If not, what are the barriers to treatment integrity? Are there unintended side-effects to the intervention?

Problem Evaluation

During the problem evaluation stage, assessment continues to determine the extent to which intervention objectives have been met. Thus, assessment data would compare the child's performance at this stage with desired goals previously specified during the problem identification stage (Bergan & Kratochwill, 1990). In the problem evaluation phase, sample questions to guide the problem evaluation assessment process include: What data are being collected to monitor treatment efficacy (e.g., direct observations, permanent products, rating scales, curriculum-based evaluation)? Are procedures for monitoring student outcomes being followed (e.g., percentage of work completion is being tracked on a daily basis)? Have the goals of the intervention been reached?

As before, interviews, rating scales, and direct observations could all be used to assess treatment efficacy. If, however, the assembled data reveal that some goals have not been met, then further assessment would be indicated and the school psychologist should return to the problem analysis phase. We also encourage school psychologists to include a Parent Daily Report (PDR; see Pelham, 1993) as part of the treatment evaluation plan. For this, the school psychologist consults with the teacher and/or parent to identify and operationally define the specific behaviors of concern and targets of intervention. A behavioral report is then constructed in rating scale format, reflecting the specific concerns articulated by the teacher or parent (e.g., frequency of inappropriate verbalizations during class). The teacher then completes the report on a daily basis, providing the school psychologist and parent with on-going evaluations on the target behavior(s). One example is seen in Roberts and Landau (1995), in which the authors developed a PDR as part of their research on the utility of curriculum-based data in medication trials (see Figure 1). In the case of Allen, his teacher was asked to briefly describe specific behavior problems believed to interfere with his academic performance. A behavioral report was then constructed for the behaviors that Allen's teacher considered most dele-

Figure 1. Example of a Parent Daily Report form

Parent Daily Report

Date: ______________________

For each behavior listed below, please check the frequency that best describes Alex's behavior for today.

1. Out of his seat at inappropriate times in the classroom.
    ______ Never
    ______ Sometimes
    ______ Often
    ______ Always

2. Using foul language.
    ______ Never
    ______ Sometimes
    ______ Often
    ______ Always

3. Talking out at inappropriate times in the classroom.
    ______ Never
    ______ Sometimes
    ______ Often
    ______ Always

5. Handling or playing with items from his desk at inappropriate times.
    ______ Never
    ______ Sometimes
    ______ Often
    ______ Always

6. Avoiding eye contact with the teacher.
    ______ Never
    ______ Sometimes
    ______ Often
    ______ Always

Comments: ____

____

terious. These behaviors were evaluated daily by Allen's teacher, and these ratings were subsequently summed and graphed for treatment evaluation.

One of the appealing features of the parent daily report is that it does not rely upon pre-defined concerns that are typically found in published rating scales. Rather, every PDR is individually derived for each student (increasing its social validity). Thus, a PDR may include three target behaviors for one student or five objectives for another. A second advantage to this method of outcome evaluation is that items on the PDR stem directly from the teacher and parent who are consulted during intervention planning. This collaborative effort may facilitate the consultation process, thereby permitting consultees to have a greater sense of ownership of the specific treatment objectives. A third benefit of using the PDR for plan evaluation is that it provides an effective means by which home-school collaboration and communication is improved. Specifically, a teacher daily report can be sent home every evening to the parent, thereby providing the parent with information about school-based progress on a day-by-day basis. This is especially helpful in the case of psychostimulant trials in school. The PDR is a cost-effective and time-efficient way to provide parents with daily teacher information of how their child is responding to treatment.

Assessment of Medication Effects

Since most children with ADHD experience a trial of psychopharmacological therapy sometime during childhood, the school psychologist is in a primary role to conduct an assessment of medication effects during the problem evaluation stage. Knowledge of medication evaluation procedures is especially important, as a given dose of psychostimulant medication may not exert the same therapeutic effect in all domains of functioning for a given child or across children. In the absence of systematically school-based collected data, prescribing physicians are left with few options except to rely on parent anecdotal reports to determine proper dosage. Thus, dose effects should be considered as part of the assessment process for children with ADHD.

The school psychologist is in a unique position to interface with various professionals involved to coordinate data collection and analyze effectiveness of psychostimulant medications. One medication evaluation procedure suggested by Roberts and DuPaul (2000) involves an eight day multimethod protocol, using teacher rating scales (e.g., *ADHD Rating Scale-IV*; DuPaul et al., 1998), academic achievement data (curriculum-based assessment), and direct observations. Their protocol consists of three major phases: pre-medication procedures, medication trial, and interpretation of results. During pre-medication procedures, the school psychologists, in conjunction with the classroom teacher, would determine the appropriate academic materials (level of difficulty matched to student ability level) to be used for assessing medication response. Additionally, a direct observation would be conducted, and a teacher would complete a behavior rating scale. Next, during the medication trial, four medication conditions would be evaluated: 5 mg, 10 mg, 15 mg, and placebo.

Prior to the medication trial, the physician randomly selects the schedule of dose trials (e.g., week one: 5 mg; week two: placebo; week three: 15 mg), and, in the ideal case, only the physician and pharmacist would know the order of conditions. The child would receive medication or placebo each day of the medication trial. Direct observation and academic performance data are collected daily within each condition. Based on these data, the school psychologist can recommend to physicians which condition seems most efficacious. A PDR also can be used to monitor the child's performance on a daily basis, and provide parents feedback regarding the child's medication response. At the same time, treatment-emergent symptoms or side effects should be monitored. The reader is encouraged to consult Roberts and DuPaul (2000) or Northrup and Gulley (2001) for a complete description of a school-based drug evaluation protocol.

Specific Methods of Assessment

Given the view presented earlier, assessment is an ongoing process and progresses with multiple objectives in mind. Throughout this process, school psychologists need to consider the entire range of potential difficulties that could be experienced by a child with ADHD. Thus, it is not sufficient to determine the extent to which the child exhibits inattentive and hyperactive/impulsive behaviors (plus a specification of settings and situations in which these problems present). One must also consider potential secondary problems typically found in samples of these children.

These include conduct disorders, academic difficulties, disturbed peer relations, and internalizing problems (e.g., self-esteem deficits and depression), among others. We will review several methods we consider essential in an ADHD assessment battery.

RATING SCALES

Behavior rating scales are a vital component in the assessment of children with ADHD. They allow school psychologists to determine *the degree to which* a child exhibits certain characteristics relative to same-age and same-gender students (i.e., symptom severity from a normative perspective). In addition, they collapse information about how a child functions in naturalistic contexts over extended periods of time (Atkins & Pelham, 1991), and provide insight into concerns experienced by significant others who work and live with the child. They also permit a cost-effective method of data collection on infrequently occurring behaviors that may be missed by more direct methods (e.g., direct observations).

Indeed, the use of rating scales is consistent with a best-practice process described by Power and Eraldi (2000) and Power, Costigan, Leff, Eiraldi, and Landau (2001). This process involves consideration of both categorical and dimensional criteria for ADHD classification. Specifically, it is recommended that we should not only establish that diagnosis-relevant symptoms are actually present (i.e., the child has symptoms indicative of ADHD, the categorical criterion) but also ensure these symptoms are sufficiently severe to warrant classification (i.e., their severity exceeds a cut-off score on a recognized behavior rating scale; the dimensional criterion). To this end, several ADHD-specific rating scales seem appropriate. The first is the *ADHD-IV Rating Scale* (DuPaul et al., 1998). The items from this scale were derived directly from the *DSM-IV* (American Psychiatric Association, 1994) diagnostic criteria for ADHD. Each item can be rated by parents and/or teachers to reveal level of severity of ADHD symptoms. Scores are derived to represent total symptom severity, as well as scores for the two ADHD subtypes. The *ADHD-IV* has sound psychometric properties and has been used by many ADHD research groups for participant selection purposes. Clinical utility is due to its ability to inform school psychologists about the severity of the child's problem from a *DSM* perspective. Finally, there is an Hispanic version of the *ADHD-IV*, which further extends its usefulness. Thus, we consider it an excellent way to provide physicians and child psychiatrists information on the severity of school-based concerns using criteria familiar to medical professionals. Other relevant scales include the *Conner's Rating Scales-Revised* (*CRS-R*; Conners, 1997), the *ADD-H* Comprehensive Teacher's Rating Scale (*ACTeRs*; Ullmann, Sleator, & Sprague, 1997), and the *Behavior Assessment System for Children: Monitor for ADHD* (*BASC Monitor*; Kamphaus & Reynolds, 1998). However, examination of normative, reliability, and validity data regarding these scales encourages us to recommend the *ADHD-IV Rating Scale* and the *CRS-R* for school psychologists. The reader should consult Barkley (1998) for further discussion of these issues.

Despite the ease with which rating scales can be used and the wealth of data they provide, rating scales have some limitations. For example, resulting data simply represent opinions of others and, as such, can be influenced by mood and cognitive, social, or educational characteristics of the rater (e.g., Kolko & Kazdin, 1993). In addition, rating scales reflect the limitations inherent in any retrospective report, including distortions in memory and informant bias. For example, informants differ in their standards for determining problem severity (Reid & Maag, 1994). Finally, rating scales have a pathology focus by highlighting areas of dysfunction without capturing the uniqueness of the child's style or the strengths the child presents. Thus, results of these indirect measures should be interpreted with this caution in mind: They may not portray the child's *actual* behavior but, instead, an informant's impressions of that behavior.

During the first stage of assessment, problem identification, school psychologists should select and utilize rating scales as a strategy to delineate the specific referral concerns. Many of those with direct contact with the student should complete these scales (e.g., teachers or caretakers). This is important, as both ADHD symptoms and rating scales are sensitive to setting effects. Thus, the school psychologist can better understand who views what behavior as problematic, and how perceived differences in degree of deviance vary as a function of setting or situation. During problem analysis, a careful review of rating scale data can be invaluable in developing intervention plans. Not only can these data reveal specific concerns as a function of each informant (e.g., the mother reports significantly more oppositional and defiant behavior than her husband), but differences in symptom severity as a function of various classroom settings may indicate where interventions must be concentrated. For example, a child with ADHD may have difficulty following directions and completing assignments only with the math teacher. This determination would evoke an hypothesis (to be further assessed by other methods) that the problem behavior may be situational, setting, or informant-specific.

For problem evaluation, rating scales are invaluable as an objective measure of the child's response to intervention. By re-administering the same rating scales to informants who previously provided data for problem identification, the school psychologist will be able to make a baseline versus response-to-treatment comparison. Indeed, these scales should be administered intermittently throughout the intervention to evaluate its continued potency.

COGNITIVE AND EDUCATIONAL ASSESSMENT

Because the disinhibition and attentional difficulties common in children with ADHD can interfere with the educational process, assessment of academic functioning must be considered. Standardized tests of cognitive ability and achievement can be useful for problem analysis. These norm-referenced tests are important, as many students with ADHD experience learning disabilities, and many states require standardized tests to determine eligibility for special education services. Despite the potential utility in identifying specific patterns of academic difficulties, standardized intellectual and achievement tests have limited value for the development of a remedial plan or for monitoring the effectiveness of treatment.

Criterion-referenced tests and curriculum-based measures show promise in delineating the student's academic needs and strengths, and therefore are useful for problem analysis. Being more sensitive to academic growth, they are also appropriate for designing specific academic intervention strategies (for additional information see Howell, this volume; Shapiro, 1996; Shinn, 1998). A compilation of the academic portfolio (i.e., a collection of work samples over time) will also reflect changes in the student's performance and is, therefore, extremely useful in monitoring progress and evaluating intervention effects.

INTERVIEWING

Interviews are an essential component of all stages of the assessment, intervention, and outcome evaluation process with children with ADHD. Specifically, they can provide critical contextual information regarding rules, expectations, and supports available in the environments in which the children are functioning. Interviews with teachers, parents, and children may yield a wealth of information beyond that obtained from rating scales and standardized cognitive assessments and, as such, serve multiple purposes. It is recommended that school psychologists meet individually with parents, teachers, and the referred child, building rapport with each, and gathering information unique to that person's point of view.

During the problem identification stage, the school psychologist not only gathers information about the problem behaviors but also the child's strengths. In addition, information should be sought regarding behavioral expectations of the classroom and broader school environment, past strategies (both successful and unsuccessful) used to address the problems, and current resources available to parents and teachers. This first interview also sets the tone for future collaborative efforts with the team to establish and evaluate intervention strategies. Here, semi-structured interviews (e.g., SCICA; McConaughy & Achenbach, 1994) and behavioral interviews focused on clarifying the operational definition, frequency, duration, severity, and contextual determinants of problem behaviors should be used. To provide a complete picture of the child, interviews should also carefully identify patterns of appropriate or non-problematic behavior, as the specific contexts may provide clues to intervention strategies.

During the problem analysis phase, school psychologists can use interview information to generate preliminary hypotheses about the functions of target behaviors. Thus, the reported patterns of behavioral difficulties and behavioral successes should be evaluated, particularly looking for conditions under which problematic behavior is almost sure to occur and those under which it is unlikely to occur. The interview also should obtain information on antecedent events (e.g., academic task) and environmental consequences (e.g., peer or teacher attention) associated with the problem behavior. Additionally, other contextual variables, such as the child's social relations, emotional state, and stress level of parents and teach-

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ers, as well as and coping strategies, should be considered. The reader is referred to O'Neil et al. (1997) and Witt et al. (2000) for some useful interviewing tools when conducting an FBA.

Interviews may provide critical information for the design of a relevant and practical intervention (e.g., identifying potential reinforcers), and allow the school psychologist to gain better understanding of consultees who may implement the intervention. While there are numerous effective interventions, in practice the intervention will only be as effective as those who implement it. With this in mind, interviews can help the school psychologist discover consultees' attitudes about, and acceptability of, a particular intervention (see Elliott, 1988), thereby having implications for treatment integrity.

After an intervention has been implemented, interviews provide information on treatment effectiveness. It is an excellent opportunity to review data, comment on progress, reinforce the child's and consultees' efforts in implementing the program, and trouble-shoot areas in which the program has not been effective. At this point, sometimes only simple modifications are needed to make a program successful, but without interviews the details of intervention implementation are often missed. For example, a child may respond favorably to an intervention in one situation (e.g., math class) but not in another (e.g., reading lessons). A simple analysis via interviewing may reveal slight differences in the environment, such as seating arrangement, which may have significant impact on treatment efficacy.

At each phase it is important to touch base and interview all participants, keeping in mind the unique contributions of parents, teachers, and children. Specifically, parents are the best informants regarding the child's developmental, medical, and family histories. Equally important, parents can provide details of current family functioning (e.g., response to stressors, marital discord) and the child's role and behaviors in the home context. The reader is advised to consult Barkley (1998) and O'Neill et al. (1997) for detailed guidelines in the development of a parent interview.

Alternatively, teachers may provide information regarding the child's behavior in various academic settings and during social interactions. Teachers can provide details about the child's work habits (e.g., carelessness, disorganization) and style of academic performance (e.g., problems related to inefficiency). In addition, the teacher's interview should pursue the child's ability to follow instructions at school, transition from one activity to another, and establish if there are problems in the peer group. Finally, the interview should permit the school psychologist to assess resources available to the teacher to permit an effective school-based intervention, and special consideration should be made of the teacher's need for collaborative support from the school psychologist and other professionals working with the child.

Finally, some mention should be made of a direct interview with the child. Although the purpose of this interview will depend on the age and maturity of the child, the interview itself will facilitate rapport for subsequent sessions with the child, and permit the school psychologist to observe the child directly (e.g., language usage, ability to follow directions, and overactive/fidgety symptoms, attention). As an interview session is typically a novel, structured, one-on-one interaction, it is important to note the presence or absence of particular behaviors during the interview may not predict the child's behavior outside the psychologist's office. It is also important to remember that children's self-reports are notoriously inconsistent with reports from other informants, as children with ADHD have been found to deny about 50% of the problems their mothers attribute to them (Landau, Milich, & Widiger, 1991). Despite these caveats, interviews with children provide a unique perspective on the problem behavior.

DIRECT OBSERVATION

Based upon informant concerns that emerge from the use of interviews and ratings scales, the school psychologist should also conduct systematic observations of the child with ADHD, as these data will provide unique information about performance in response to various demands of the school setting. If the school psychologist observes the target child and all same-gender classmates engaged in the same activity, then resulting data can contribute to problem identification. For example, if the teacher complains about a boy who "never seems to get his math workbook problems completed; he daydreams constantly instead of doing his work," a duration measure of on-task behavior can be contrasted with average duration of all male classmates. These contrast data will establish if a problem does, in fact, exist, and also suggest a realistic level of performance to serve as the intervention objective. Where time constraints exist, comparisons can be made between the target child's behavior and a small subset of teacher identified representative classmates (e.g., two to three children).

Second, direct observations are necessary for problem analysis. Structured observations can verify information from indirect assessments methods (e.g., rating scales, interviews) and are useful in confirming or disconfirming initial hypotheses regarding causes of problematic behaviors. Structured observations not only clarify *what* the child is actually doing, but also provide important information about the settings and situations in which problem behaviors occur. Because observations can be conducted repeatedly, they also can provide information about the stability and patterns of the child's behavioral strengths and areas of concern. Through direct observation, school psychologists can identify potential antecedent conditions that precede the occurrence of problematic behaviors and consequences that may maintain these behaviors (i.e., identify the potential functions these behaviors serve). Thus, observations represent the best method of identifying controlling variables in the environment and, as a consequence, are necessary for the design of interventions

Third, observation data can be used for plan implementation and evaluation. This is most directly relevant in modifying existing treatment plans and developing the most consistently effective intervention for a child with ADHD. After a plan is implemented, direct observations can provide data about treatment integrity. For example, the school psychologist may observe in the classroom to determine if the teacher is dispensing strategic feedback as prescribed. Direct observations can establish the efficacy of an intervention and, more specifically, the contexts in which the intervention is effective and situations in which it is not. If treatment is not effective, then observational data provide clues to potential contributors to treatment failure and may identify specific aspects that can be changed (e.g., targeting different behavior, changing consequences, providing additional support to teachers and others implementing the intervention).

Thus, direct observations can serve multiple assessment purposes, and offer the most direct and ecologically valid data available to school psychologists. Unfortunately, no single observation system is considered appropriate for all children with ADHD. Instead, the selection of particular code categories, and the recording method to be used (e.g., duration versus event recording), depends on specific informant concerns that emerged during problem identification. Various settings for observation can be identified based on this previously collected information. In any case, it is crucial to observe the child with ADHD in multiple settings and situations. For example, the school psychologist may seek to determine differences in classroom performance as a function of small versus large group activities, teacher-directed versus self-paced academic seatwork, highly structured versus informal classroom settings, and restricted academic versus free play activities. From this perspective, resulting data are always considered in the context of a particular setting, as situational factors account for much of the variance in observed child behavior. In most cases, the system should at least be sensitive to the occurrence of inattention, motor excess, and impulsive responding in the classroom. The reader is encouraged to consult Hintze (this volume) or Platzman et al. (1992) for a discussion of different observation systems.

Computer-Driven Measures of ADHD

Clearly, some mention should be made about the growing use of computer-based assessment of ADHD. There has been a significant proliferation of these methods, most of which are represented by a variant of the Continuous Performance Test (CPT). In these appealing (and expensive) procedures, the child must maintain vigilance and react to the presence or absence of infrequently occurring stimuli while other (distracter) stimuli are presented. For example, the Gordon Diagnostic System (GDS; Gordon, 1991), which has achieved ubiquitous presence in ADHD clinics, provides scores for delay-of-responding, vigilance, and distractibility. Another measure, familiar to many school psychologists, is the Conners Continuous Performance Test (Conners, 1995).

These CPT methods are typically used to facilitate the diagnostic or classification process, and remain seductive because of their putative objectivity. However, they may do no more than provide a false sense of security. Currently, there are no well-established objective measures of ADHD as a diagnostic entity, and one might reasonably ask why one is needed. Indeed, there are no objective measures for other forms of child psychopathology (e.g., autism or child depression). Apparently, the use of an objective procedure makes us feel more comfortable about our diagnostic determination.

Some investigators have recently examined the clinical utility of CPT in the diagnostic process. For example, Rielly, Cunningham, Richards, Elbard, and Mahoney (1999) reported the GDS had such low positive predictive values (PPV) for an ADHD diagnosis the clinician would be "more wrong than right" if assuming an abnormal score was indicative of ADHD. However, their findings did suggest that children who scored within normal limits probably do not have the disorder. Unfortunately, this is useless information unless we are attempting large-scale screening with the GDS (a very expensive undertaking). McGee, Clark, and Symons (2000) had similar concerns about the Conners CPT. In their study, data revealed the CPT had questionable utility because of its failure to distinguish children with ADHD from other clinic referrals.

These studies were designed to examine classification accuracy and involved several indices, such as hit-rate analysis. However, concern with the CPT goes well beyond an alleged ability to correctly classify ADHD in children: These procedures do not have ecological validity (Barkley, 1991). In other words, the child's performance on the CPT in the lab will never inform us of how the child will function in the classroom. In addition, the resulting data (assuming correct classification) cannot be used for the design of interventions. Under the best of circumstances, these procedures may tell us "what the child has," but not "what the child needs." Practitioners who rely on these methods should do so with these important caveats in mind.

Guidelines

The following guidelines are suggested for the multi-informant and multi-method school-based assessment of children with ADHD. These guidelines should not be considered as a rigid chronology for the assessment process but instead as a flexible model for decision making to be linked directly to the planning and evaluation of interventions.

1. Identify the major concerns of referral sources (rating and interviews) and apply a developmental perspective to establish degree of deviance from age-mates (ratings). Begin to cluster specific concerns into areas of developmental domains of functioning (e.g., inattention, hyperactivity/impulsivity, academic, peer relations, internalizing problems) and into settings or situations of occurrence (e.g., home, school, free play with peers, community).

2. Operationally define target behaviors of concern, as well as appropriate alternative behaviors. Identify the frequency, intensity, duration of misbehaviors, and estimated desired level of functioning. Rank-order the concerns into a hierarchy of troublesomeness/seriousness for this child. This will help establish which interventions should be applied first and which may come later.

3. Conduct direct observations in all settings to identify where problem behaviors do and do not occur. Direct observations are useful to (a) verify informant concerns, (b) further establish degree of deviance by concurrently observing child and same-gender classmates, (c) determine relevant situation/setting effects that account for differences in informant reports, and (d) identify immediate environmental conditions (e.g., antecedents and consequences) and more distal factors (e.g., setting events) hypothesized to be responsible for the inception and maintenance of problem behaviors.

4. Generate hypotheses about the function of behavior. If necessary, conduct a functional analysis of behavior to verify hypotheses and isolate controlling variables in each setting that may provide suitable targets for intervention.

5. Identify unique aspects of the case that have implications for treatment planning. For example, make note of particular features in the classroom environment that could compromise a prescribed behavioral intervention (e.g., teacher reprimand may not be effective in the context of positive peer attention), develop an understanding of parent and teacher acceptance of potential interventions being considered, assess parent and teacher ability to serve as consultees during the intervention process, and establish child characteristics that

could relate directly to the selection of a particular intervention (e.g., social skills training designed to increase rates of interaction will not be suitable for an aggressive child). These unique aspects can be identified through the use of interviews and direct observations.

6. Using information gleaned from functional assessment, list all interventions that seem appropriate to decrease maladaptive behaviors and replace them with alternative, adaptive behaviors. This should be done in collaboration with parents and teachers. Select an intervention based on resources, treatment acceptability attitudes, and strengths noted in the child.

7. Design and apply specific interventions according to a hierarchical list of concerns, the unique features of this case, and the function of behavior.

8. Assess treatment integrity of interventions using direct observations or collaboratively develop a treatment integrity checklist with the classroom teacher.

9. Evaluate intervention effectiveness using multimethod, multi-informant strategies (e.g., parent and teacher rating scales, parent daily report, direct observations, self-reports, academic measures, curriculum-based evaluation).

10. Conduct post-treatment follow-up using previously applied assessment methods.

SUMMARY

Assessing students who exhibit ADHD symptoms represents a daunting challenge for school psychologists. Samples of children with ADHD are extremely heterogeneous, and the prospects for comorbid disorders are high. Clearly, the diagnosis of ADHD per se does not inform intervention planning for any of these youngsters.

A problem solving paradigm, based on Bergan and Kratochwill's (1990) consultation model has been offered to guide the evaluation process for students whose ADHD problems are negatively impacting their functioning in school. During problem identification, the school psychologist determines specific behaviors that are causing concern in the school setting; during problem analysis, focus is on identifying variables that permit attainment of a solution, and may include intervention development; during plan implementation, treatment integrity is monitored; and during problem evaluation, the assessment process continues to determine the extent to which treatment objectives have been met.

The preceding discussion highlights the fact that a comprehensive and efficient assessment of children with ADHD involves procedures that serve *multiple purposes*. Thus, ideal assessments (e.g., interviews, direct observations) are those that may be used at all stages of the problem-solving paradigm (i.e., problem identification, problem analysis, plan implementation, and problem evaluation). Additionally, a comprehensive assessment of children with ADHD must reflect a protocol comprised of several characteristics. First, it must engage *multiple methods* of assessment. Each method (interview, rating scale, or direct observation) can account for only a portion of a description of the child. Thus, a sufficient assessment uses numerous and diverse procedures. Second, assessment should depend on *multiple informants* (parents, teachers, child, peers). Multiple sources are critical in the assessment of children with ADHD because different informants may evoke different behaviors from the same child, informants differ in terms of their respective expectations and demands placed on the child, and finally, because each informant is embedded in a unique environment. Third, children with ADHD should be assessed in the context of *multiple settings*, as data are consistent in documenting that these children do not present the same problem in a trans-situational fashion. Obviously, specific setting differences need to be integrated in the details of problem identification, problem analysis, and ultimately, problem evaluation. Finally, the assessment and intervention process must be *developmentally sensitive*. With a developmental perspective, school psychologists are likely to more accurately identify problems and implement age-appropriate interventions.

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The most comprehensive and scholarly text pertaining to children with ADHD. Topics are quite diverse, including an exhaustive review of rating scales and an excellent discussion of classroom-based modifications and interventions.

National Organization of Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD) website: http://www.chadd.org

This web page is sponsored by the largest parent support group for children with ADHD. The web page offers resources and references school psychologists can use when providing information to parents and teachers regarding assessment, treatment, and legal/placement issues. Additionally, this organization publishes a newsletter, *Attention*, which is accessible from the website.

Witt, J. C., Daly, E. M., & Noell, G. (2000). *Functional assessments: A step-by-step guide to solving academic and behavior problems.* Longmont, CO: Sopris West.

This is an excellent manual that school psychologists can use when conducting functional assessments for academic or behavioral concerns. This resource provides usable data collection forms and practical step-by-step guidelines for collecting functional assessment data and linking the results to classroom-based interventions.

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Best Practices In Suicide Intervention

Scott Poland
Cypress-Fairbanks Independent School District
Richard Lieberman
Suicide Prevention Unit
Los Angeles Unified School District

OVERVIEW AND SCOPE OF THE PROBLEM

In 1997, 14% of all suicides were committed by people under age 25 (Hoyert et al., 1999). Suicide rates for those 15–19 years old were 300% higher than those same age peers of the 1950s, but have remained largely stable at these higher levels since 1980. Alarmingly, the suicide rates for those between the ages of 10 and14, however, have increased 196% in the last 15 years (Peters et al., 1998; American Association of Suicidology, 1996). This has extraordinary implications for school psychologists who find themselves overwhelmed with referrals of depressed and suicidal students.

The essential first step of the intervention process requires the ability to make an accurate assessment of risk. Because this assessment will guide your actions throughout the referral process, it is important to first understand the developmental and cultural factors of youth suicide relevant to the intervention process.

Developmental Factors

Research shows mortality from suicide, which increases steadily through the teens, is the third leading cause of death for youth between the ages of 15 and 24 and fourth for those aged 10–14 (Hoyert et al., 1999). Among 15–19 year olds, for every female suicide there are 4.4 male suicides. Among 20–24 year olds this ratio increases to 6.8 : 1. Conversely, among the 10–14 year olds this ratio is the smallest, 2.7 : 1 (American Association of Suicidology, 1996). It has been estimated that there are more than 100 youth suicide attempts for every youth suicide (Ramsay , Tanney, Tierney, & Lang, 1996), and, in the 15–19 year old age group, girls make two of every three of these attempts (U.S. Department of Health and Human Services, 1999).

While completed suicides are relatively rare, other forms of suicidal ideation and behaviors are much more common. Data from two risk behavior surveys are presented in Table 1. Simply stated, for every two youths that attempted suicide, one went to the hospital while one went to school. Although rates vary somewhat by geographic location, within a typical high school classroom, it is likely that three students (one boy and two girls) have made some form of suicide attempt in the past year (American Association of Suicidology, 1996).

As the age of the at risk population drops, a cognitive developmental perspective must be explored. Normand and Mishara (1992) suggested that the understanding of the concept of suicide should be clearly related to a child's age as well as their concept of and experiences with death. A more recent paper suggested that all school children have some general knowledge about suicide (Mishara, 1999). While studies of the progression of children's understanding of suicide are rare, there is a more substantial body of literature on the development of ideas about death.

Table 1. Youth Risk Behavior Surveillance

	YRBSS-1997[a]	*ALT-YRBSS-1998*[b]
	Percentage of students responding	
Seriously considered attempting suicide	20.5	25.0
Made a specific plan	15.7	20.5
Made an attempt	4.5	15.7
Made an attempt requiring medical attention	2.6	7.4

[a] Kann et al. (1998).

[b] Grunbaum et al. (1998).

Piagetian theory states that in the formal operational period (age 12 and up), death is seen as not only irreversible but also as personal. However, Orbach and Glaubman (1979) caution that "many children show a split in the death concept: they may have a mature concept of impersonal death, but a rather childish concept of their own personal death. Only the exploration of the emotional and personal aspects of the death concept is of value diagnostically and therapeutically" (p. 677).

In the assessment of suicide risk, the school psychologist is cautioned that when a student is thinking about hurting himself or herself, it is best to assume the student is not thinking realistically. It would not be unusual for any student, sometimes even as old as 16, to view death as magical, temporary, and reversible.

Ethnicity, Cultural Factors, and Sexual Orientation

The suicide rate for white males (15–24) has tripled since 1950, and the rate for white females (15–24) has doubled. Although data regarding suicidal behavior among minority youth are very limited (Roberts, Chen, & Roberts, 1997), recent Centers for Disease Control and Prevention (CDC) studies have identified at-risk populations previously unrecognized. Between 1980 and 1992 the rate for African-American males (10–14) increased 300% while the rate for the white females (10–14) increased almost 240% (Karchur, Potter, James, & Powell, 1995).

Overall, African-American male adolescents (15–24) have shown the greatest increase in suicide completion rates in the 1990's relative to other ethnicities (American Association of Suicidology, 1996). Their rate has risen by 67% from 1980–1995 (American Foundation for Suicide Prevention, 1996). Risk factors for African-American suicide include being male, having a substance abuse problem, having a psychiatric disorder, having antisocial behavior, and being homosexual. Protective factors that mitigate the risks of suicide include religious affiliation and social support (Gibbs, 1997).

Recent data suggest that in 1997 Hispanic students had the highest rates of suicidal ideation and behaviors (Kann et al., 1998) and were more likely than other students to attempt suicide (U.S. Department of Health and Human Services, 1999). However, this has yet to translate into a substantial increase in completed suicides. Heightened levels of acculturative stress may result in critical levels of suicidal ideation in Mexican-American adolescents (Hovey & King, 1996).

The Native American male adolescent and young adult are still the highest risk group in the United States. The rate in Indian Health Service Areas was the highest in the nation at 62.0 per 100,000 (Wallace et al., 1996). The problem of acculturation has been proposed as one of the major causes of depression and suicidal behavior among Native Americans. However, the majority of research reports that Native Americans who attempt or complete suicide mention precipitating causes such as grief over loss and quarrels with relatives and friends (Lester, 1997).

Gay and lesbian youth are 200–300% more likely to attempt suicide than other young people and they may comprise up to 30% of completed youth suicide annually (Gibson, 1989). Recent analyses of the Youth Risk Behavior Survey, Massachusetts (1997) revealed that adolescents who identified themselves as gay, lesbian, or bisexual reported significantly higher rates than their heterosexual peers of considering suicide (54% versus 22%), of making a suicide plan (41% versus 18%), of actually attempting suicide (37% versus 8%), and of requiring medical attention for a suicide attempt (19% versus 3%).

The authors share Moscicki's observation that, in general, research on this issue is complicated by the lack of accurate information on the true rate of homosexuality in the population and the strong emotions it generates in many otherwise objective discussions (Moscicki, 1995). When gay and lesbian students are referred to a professional to assess suicide risk, practitioners are advised this may be a population, similar to the Native American youth, with higher rates of victimization, drug and alcohol abuse, and familial rejection.

Today's school psychologists face a population of referred youth that is growing in racial and cultural diversity. Language and cultural differences will further complicate an already complex referral process. Practitioners will need to familiarize themselves with the many cultures represented in their school districts and to strengthen their cultural awareness skills. School psychologists will also need to utilize language interpreters when necessary and to become aware of appropriate community agencies that focus on the needs of specific populations (Lieberman & Davis, in press).

BASIC CONSIDERATIONS

Youth suicide is a multidimensional and complex behavior with many associated risk factors. These include psychopathological, familial, biological, and situational factors (Davis & Brock, in press; Moscicki, 1995; Berman & Jobes, 1991).

Risk Factors of Youth Suicide

Research indicates similar risk factors for boys and girls (Groholt, Ekebert, Wichstrom, & Haldorsen, 1997). However, marked differences exist in their relative importance (Shaffer et al., 1996). Major depression and/or a previous attempt are the most important risk factors for girls, and for boys the risk factors include a previous attempt, depression, disruptive behavior, and/or substance abuse.

PSYCHOPATHOLOGICAL DISORDERS

There is strong evidence that over 90% of children and adolescents who commit suicide have experienced a mental or emotional disorder before their death (Shaffer et al., 1996; Conwell et al., 1996). The disorders most closely associated with suicide are affective disorder and substance abuse (Brent & Perper, 1995).

Affective Disorder. The most frequently diagnosed mood disorders are major depressive disorder, dysthymic disorder, and bipolar disorder (U.S. Department of Health and Human Services, 1999). Estimates are that 60% of suicide victims are diagnosed with depression. Estimates of depression for youth range from 20 to 55% (Diekstra & Garnefski, 1995). Females are almost twice as likely to experience a major episode of depression (Berman & Jobes, 1995). Roughly two-thirds of children and adolescents with major depressive disorder also have a coexisting or concurrent disorder (Anderson & McGee, 1994). The most frequent concurrent disorders are substance abuse, antisocial/conduct disorder, or anxiety disorder. There is substantial co-morbidity of depression, conduct problems, and drug or alcohol abuse among high school students reporting suicide attempts. Co-morbidity increases the risk of a suicide attempt beyond that found among adolescents who report these disorders in isolation from one another (Wagner, Cole, & Swartzman, 1996).

Substance and Alcohol Abuse. As alluded to above, substance abuse plays a major role in suicide. Intoxication is present in half of all youth suicide (Moscicki, 1995). Those with a history of alcohol abuse are six times more likely to die by suicide than is the general population (Ramsay et al., 1996).

Familial Factors. Family characteristics that increase youth suicide risk include a family history of suicide and of medical and psychiatric illness. Economic stress, significant family strife, and family loss are also associated with increased risk; and suicidal children experience more parental separations, more parental divorces, and more parental remarriages (Davis & Brock, in press; Davis & Sandoval, 1991). Suicidal adolescents perceive their families as being less cohesive and more disengaged, and conflict and violence occur at increased rates within those families (King et al., 1995).

Biological Factors. Neuro-chemical studies have found some evidence of serotonergic dysfunction in adult suicide attempters and completers but the exact relationship has yet to be clarified (Moscicki, 1995).

Situational Factors. Perhaps the strongest of the situational risk factors at least in the United States is the presence of a firearm (CDC, 1997; Brent, Perper, Allman, Moritz, Wartella, & Zelenak, 1991; Kellerman et al., 1992). Firearms are the most common method of suicide (Karchur et al., 1995). Many believe that the increase in rate of youth suicide over the past four decades is largely related to the use of firearms as a method (American Association of Suicidology, 1996). Guns in the home, particularly loaded guns, are associated with increased risk for suicide by youth, both with and without identifiable mental health problems or suicidal risk factors (Brent et al., 1993). Although most gun owners reportedly keep a firearm in their home for "protection or self defense," 83% of gun-related deaths in these homes are the result of a suicide, often by someone other than the gun owner. In general, states with stricter gun laws have lower rates of suicide (American Foundation for Suicide Prevention, 1996).

It is useful to consider suicide as comprising two related factors. The first, an acute factor, is a precipitating event; that is, an event of emotional relevance to this particular adolescent. When this occurs in a child with a second factor (i.e., chronically poor coping skills), then the risk is greatly increased (Lieberman & Davis, in press). Repeat attempters use their behavior as a means of coping with stress and tend to exhibit more chronic symptomology, poorer coping histories, and a higher presence of suicidal and substance abusive behaviors in their histories (American Association of Suicidology, 1996).

It is estimated that 26–33% of adolescent suicide victims have made a previous attempt (American Foundation for Suicide Prevention, 1996). Most adolescent suicide attempts are precipitated by interpersonal conflicts. The intent of the behavior appears to be to effect change in the behaviors or attitudes of others (American Association of Suicidology, 1996). As many as 40% of youth suicidal behaviors appear to have identifiable antecedents (Davis & Brock, in press). Some situational crises are included in Table 2.

Often, in the aftermath of a suicide, these situational factors may be mistakenly viewed as a cause of suicide. Research has shown that situational factors may create the conditions that lead to suicide only when combined with other risk factors (Moscicki, 1995).

BEST PRACTICES IN SUICIDE INTERVENTION

Identifying Suicidal Youth

Individuals who are thinking about suicide usually give signals (Ramsay, Tanney, Tierney, & Lang, 1990). It has been widely written that four of five suicide victims demonstrated identifiable warning signs, often providing verbal clues. Elementary children do not, in general, self-refer; and it is often their behaviors that provide the clues to their intentions. The first step in the identification of a suicidal youth is gaining the knowledge of the indicators of potential suicidal behavior. An effort should be made to keep all gatekeepers of children and adolescents in the school community (peers, parents,

Table 2. Situational crises

- *Loss.* Today's youth seem to possess more avenues to loss in their lives. Among these are loss of a loved one; losses suffered when families break up; losses caused by transience and relocation; and losses of self-esteem, romance, or of devalued life. Traumatic grief heightens vulnerability to suicidal ideation.
- *Disciplinary crisis,* such as fear of incarceration or trouble at school. The rising rate of litigation against schools might indicate need for suicidal assessment after student suspension, expulsion, or exclusion.
- *Stressful life events,* such as poverty and academic and peer pressures.
- *Family crises,* such as family violence, parental arguments, and physical and sexual abuse are associated with suicidal behavior.
- *History of running away.*
- *Suicide completion in community* or the exposure to suicidality in others.

and school personnel) informed of the warning signs of youth suicide and of the referral process for appropriate assessment. The warning signs of youth suicide can be found in Table 3.

General Intervention Strategies

Poland (1989) summarized the responsibilities of the school: detect suicidal students, assess the severity, notify parents, secure the needed mental health services and supervision for the student, and provide follow-up at school. Lieberman and Davis (in press) summarize additional strategies:

COLLABORATION

School psychologists dealing with suicidal youth should seek support and collaboration from their colleagues (Poland, 1989, 1995). The intervention process is fraught with unexpected developments. Having the support and consultation from an administrator and one other staff member (perhaps the school nurse, counselor, or social worker) is both reassuring and prudent as you make the difficult decisions often necessary when advocating for a suicidal youth.

ASSIGN A "DESIGNATED REPORTER"

Schools should identify one or more individuals to receive and act upon all reports from teachers and other staff about students who may be suicidal (Davis & Sandoval, 1991). This individual is frequently the school psychologist, but in the event the psychologist is providing itinerant services to that school (which means the psychologist has many schools to whom they provide service), another member of staff should be designated.

SUPERVISE THE STUDENT

School psychologists should inform all students they counsel, "There are three pieces of information that if you tell me I must tell someone else in order to help you. Those are (1) if you are being abused, endangered, or neglected in any way, anywhere; (2) if you are planning to harm yourself; or (3) if you are planning to hurt another." In many cases, when a student confesses suicidal intentions, the student is unaware the school psychologist, or any educator for that matter, is not bound by confidentiality and is obligated to report the student's comments or actions to his or her parents (or to protective services, to be discussed later). It is best to always inform the student what you are going to do every step of the way. Solicit the student's assistance where appropriate. Under no circumstances should the student be allowed to leave school or to be alone (even in the restroom). Reassure and supervise the student until a parent can assume responsibility. It may be appropriate to solicit the aid of collaborators to monitor the child while the psychologist seeks a phone in private.

Table 3. Warning signs

- *Threats:* Threats may be direct ("I want to die" "I am going to kill myself") or, unfortunately, indirect ("The world would be better without me" "Nobody will miss me anyway"). In adolescence, indirect clues could be offered through joking or through references in school assignments, particularly creative writing or art pieces. In concrete and pre-operational children, indirect clues may come in the form of acting-out or violent behavior often accompanied by suicidal/homicidal threats.
- *Plan/method/access:* Suicidal thoughts must be distinguished from actual planning (Beebe, 1975). The greater the planning, the greater the potential (Ramsay et al., 1996). In evaluating the suicidal potential of a student, the lethal potential and availability of the means and the level of sophistication of the plan (including the developmental level of the interviewee) must be taken into account (Davis & Brock, in press). Familiar themes for children include running into traffic, jumping from high places, and cutting/scratching/marking the body.
- *Previous attempts:* Adolescent attempters are at increased risk for a variety of negative outcomes, including repeat attempts, psychiatric symptoms, and academic, social, and behavioral problems (Shaffer & Piacentini, 1994); 15% of individuals with a history of one or more suicide attempts will go on to kill themselves (Maris, 1992).
- *Final arrangements:* This behavior may take many forms. In adolescents, it might be giving away prized possessions (e.g., jewelry, clothing, journal). It seems likely that pre-operational elementary children lack the cognitive skills necessary to plan for making final arrangements.
- *Depression:* When symptoms of depression include pervasive thoughts of helplessness and hopelessness, a child or adolescent is conceivably at greater risk for suicide.
- *Sudden changes:* Changes in behavior, friends, or personality.

MOBILIZE A SUPPORT SYSTEM

In the hierarchy of needs, Maslow (1998) ranks connectedness with caregivers second only to feelings of safety and security. The school psychologist must establish a support system that will carry the child through the difficult challenges ahead long after the student leaves the school. Assessment of that support system will also contribute to evaluating the student's risk. It is often sensible to just ask the student, "Who do you want and who do you think will be there for you now?" and then assist the student in achieving that support. It is important for the student to feel some control over his or her fate.

NO-SUICIDE CONTRACTS

In the authors' experience, no-suicide contracts have been shown to be effective in preventing youth suicide. Figure 1 shows an example of a no-suicide contract (Poland, 1989, 1995). This type of contract helps the student take control over their suicidal impulses and reduces the anxiety of both the student and the school psychologist (Berman & Jobes, 1991; Davis & Sandoval, 1991). In cases where the suicide risk is judged to be low enough not to require an immediate treatment (e.g., there is only ideation and no suicide plan), a no-suicide contract is still recommended to provide the student with alternatives should the student's suicide risk level increase in the future. Such a contract is a personal agreement to postpone suicidal behaviors until help can be obtained. Poland (1989) suggested that "each contract be tailor made for the student. The most official looking school stationery should be used. The contract should be signed by the student and the counselor and the student should be given a copy" (p.82). However, contracts should not be used in isolation (Barrett, 1985). The contract can also serve as an effective assessment tool. If a student refuses to sign, then the student cannot guarantee the student will not hurt himself or herself. The assessment immediately rises to high risk, and the student should be supervised until parents can assume responsibility in taking the student for immediate psychiatric evaluation.

SUICIDE-PROOF THE ENVIRONMENT

Whether a child is in imminent danger or not, it is recommended both the home and the school be suicide-proofed (Davis & Sandoval, 1991). Before the child returns home and thereafter, all guns, poisons, medications, and sharp objects must be removed or made inaccessible.

CALL POLICE

All school crisis teams should have a representative from local law enforcement. If a student resists, becomes combative, or attempts to flee, then law enforcement can be of invaluable assistance. In some cases the police can assume responsibility for securing a "72-hour hold," which will place the youth in protective custody up to 3 days for psychiatric observation.

DOCUMENTATION

Every school district should develop a documentation form for support personnel and crisis team members to record their actions in responding to a referral of a suicidal student. A sample documentation form is pictured in Figure 2. Information should include reasons for referral and actions taken.

Figure 1. This is a sample of a no-suicide contract

I______________________________________agree not to harm myself.

If I am having thoughts of harming myself or committing suicide, then I will do the following until I receive help:

- Get assistance from an adult.
- Call the Crisis Hotline at__________________.
- Call the school psychologist/counselor at________________________

I understand the contract that I am signing and agree to abide by it.

____________________________________ (Student signature)

____________________________________ (School psychologist)

Note: From Poland (1995)

Figure 2. This form can be used to document the actions of school personnel when responding to a suicidal student

RISK ASSESSMENT REFERRAL DATA

REFERRAL DATE: :___:___:___: TIME:________________
MO DAY YR

1. STUDENT'S NAME: :___:___:___:___:___:___:___:___:___:___: :___:___:___:___:___:___:___:___: :___:
LAST FIRST MI

2. SCHOOL: :___:___:___:___: :___:___:___:___:___:___:___:___:___:___: CLUSTER: _____
LOC. CODE SCHOOL NAME

3. GRADE: :___:___:

4. BIRTHDATE: :___:___:___: 5. AGE: :___:___: 6. SEX: M____ F____ 7. ETHNICITY: __________
MO DAY YR

8. LIVES WITH: A. ___BOTH PARENTS B. ___MOTHER C. ___FATHER D. ___OTHER GUARDIAN

9. PARENT/GUARDIAN NAME: :___:___:___:___:___:___:___:___:___:___:___: :___:___:___:___:___:___:___:___: :___:
LAST FIRST MI

10 ADDRESS: :___:___:___:___:___:___:___: :___:___:___:___:___:___:___:___:___:___:___:___: :___:___:___:___:
NUMBER STREET APT. NO.

CITY: :___:___:___:___:___:___:___:___:___:___:___:___:___:___:___:___:___:___: ZIP: :___:___:___:___:___:

11. PHONE: HOME (:___:___:___:) :___:___:___:-:___:___:___:___: WORK (:___:___:___:) :___:___:___:-:___:___:___:___:

12. CURRENT EDUCATIONAL PROGRAM:
A. ___REGULAR C. ___RESOURCE SPECIALIST E. ___OTHER (SPECIFY) ______________________
B. ___GIFTED D. ___SPECIAL DAY CLASS F. ___MAGNET

13. BILINGUAL STATUS A. ___LEP B. ___FEP C. ___ENGLISH ONLY

14 STUDENT REFERRED BY: (CHECK ONE OR MORE)
A. ___SELF D. ___COUNSELOR G. ___NURSES
B. ___PARENT E. ___PSYCHOLOGIST H. ___OTHER (SPECIFY)
C. ___TEACHER F. ___SAAS COUNSELOR I. ___ STUDENT/FRIEND

15. REASON FOR REFERRAL: (CHECK ONE OR MORE)
A. ___DIRECT THREAT
B. ___INDIRECT THREAT
C. ___PREVIOUS ATTEMPT(S) INDICATED
D. ___GIVING AWAY PRIZED POSSESSIONS
E. ___MOOD SWINGS
F. ___SUDDEN CHANGES IN BEHAVIOR
G. ___SIGNS OF DEPRESSION
H. ___TRUANCY OR RUNNING AWAY
I. ___FREQUENT COMPLAINTS OF ILLNESS OR BODILY ACHES
J. ___DRUG OR ALCOHOL ABUSE
K. —OTHER (SPECIFY) ______________________
L. ___CURRENT ATTEMPT
M. ___COMPLETION: DATE ________________
N. ___UPDATE OF CURRENT RARD
DATE OF UPDATE: ______________________

16. PREVIOUS RISK ASSESSMENT REFERRAL: ____NO ____YES

17. DATA RECORDED BY (CASE CARRIER):
A. ___COUNSELOR C. ___NURSE E. ___ADMINSTRATOR
B. ___PSYCHOLOGIST D. ___SAAS COUNSELOR F. ___OTHER (SPECIFY) ________________

18. INTERVENTION(S) / OUTCOME(S): (CHECK WHERE APPROPRIATE)
A. ___PARENT CONTACT MADE
B. ___PARENTAL BROUCHURE PROVIDED
C. ___REFFERRAL TO COMMUNITY AGENCY
D. ___CHILD ABUSE FORM FILED (ENDANGERMENT)
E. ___HOSPITALIZATION
F. OTHER (SPECIFY) ____________________
G. ____SCHOOL SUPPORT STRATEGIES
1. ___ GROUP COUNSELING
2. ___ INDIVIDUAL COUNSELING
3. ___ PEER COUNSELING
4. ___ PROGRAM MODIFICATION
5. ___ OTHER (SPECIFY) ____________________

19. SCHOOL TRANSTER (SPECIFY SCHOOL): ____
DATE: ______________________________

A Suicide Intervention Model

The intervention component of the Los Angeles Unified School District's (LAUSD) Youth Suicide Prevention Program mandates four steps in responding to the referral of a suicidal student. First, the intervenor must assess the student's risk for suicidal behavior. Such data will determine the course of action. Second, the intervenor has a duty to warn. This will involve notifying the student's parent or a protective service agency. Third, the intervenor has a duty to refer the student to the appropriate community resources. Typically, these will be professional mental health services. Finally, the intervenor must provide follow up and support the family in accessing community resources. Each of these four components of the LAUSD suicide intervention protocol will now be discussed.

ASSESSMENT

The experience of talking to a suicidal child can be extremely stressful for the designated reporter. Poland (1989) recommends the use of a Risk Assessment worksheet, and Brock and Sandoval (1996) offer sample questions for interviewing the suicidal student (see Table 4).

School psychologists (or designated reporters), however, are often asked to make critical risk assessments under extraordinary time constraints. Thus, it is impor-

Table 4. Brock and Sandoval's (1996) Student Interview Model

Engagement

- It seems things haven't been going well for you lately. Your parents/teachers have said____. Most teens would find that upsetting.
- Have you felt upset, maybe had some sad or angry feelings you have trouble talking about? Maybe I could help talk about these feelings and thoughts?
- Do you feel like things can get better, or are you worried things will just stay the same or get worse?
- Are you feeling unhappy most of the time?

Identification

- Other teenagers/children I've talked with have said that when they feel sad and/or angry, they thought for a while that things would be better if they were dead. Have you ever thought that?
- Is this feeling of unhappiness so strong that sometimes you wish you were dead?
- Do you sometimes feel that you want to take your own life?
- How often have you had these thoughts?

Inquiry

- What has made you feel so awful?
- What problems have lead you to think this way?
- How do you think your father and mother feel? What do you think will happen to them if you were dead?

Assessment: Current Suicide Plan

- Have you thought about how you would make yourself die?
- Do you have a plan?
- Do you have the means with you now, at school, or at home?
- Where are you planning to kill yourself?
- Have you written a note?
- Have you put things in order?

Prior Behavior

- Has anyone that you know of killed or attempted to kill himself or herself? Do you know why?
- Have you ever threatened to kill yourself before? When? What stopped you?
- Have you ever tried to kill yourself before? How did you attempt to do so?

Resources

- Is there anyone or anything that would stop you?
- Is there someone whom you can talk to about these feelings?
- Have you or can you talk to your family or friends about your feelings of suicide?

Summary

- Use a suicide risk assessment worksheet (e.g., Poland, 1989) to summarize the information gained during the interview(s).

Note. From Brock & Sandoval (1996).

tant for a risk assessment protocol to have a specific set of questions that will quickly and reliably obtain needed information (Ramsay, Tanney, Tierney, & Lang, 1996). Questions often used as part of the LAUSD risk-assessment protocol address the following points:

1. What warning signs(s) initiated the referral?
2. Has the student thought about suicide? (Thoughts or threats alone, whether direct or indirect, may indicate low risk.)
3. Has the student tried to hurt himself or herself before? (Previous attempts may indicate moderate risk.)
4. Does the student have a plan to harm himself or herself now?
5. What method is the student planning to use, and does the student have access to the means? (These questions would indicate high risk.)
6. What is the support system that surrounds this student? (Including the parent in the risk assessment is critical to determining the adequacy of the student's support system.)

Assessment instruments that may assist the school psychologist fall into two categories: those that measure suicide potential and those that measure appropriate risk factors. The efficacy of utilizing any of the instruments listed below has been discussed in the literature (Davis & Brock, in press; Range & Knott, 1997; Davis & Sandoval, 1991; Davis, Sandoval, & Wilson, 1988).

1. MAPS: Measure for Adolescent Potential for Suicide (Eggert, Thompson, & Herting, 1994)
2. Hilson Assessment Profile (Inwald, Brobst, & Morrissey, 1987)
3. Suicidal Ideation Questionnaire (Reynolds, 1988)
4. The Suicide Probability Scale (Cull & Gill, 1982)
5. The Reynolds Adolescent Depression Scale (Reynolds, 1986)
6. The Children's Depression Rating Scale-Revised (Poznanski, Freeman, & Mokros, 1985)
7. The Children's Depression Inventory (Kovacs, 1981)
8. The Hopelessness Scale for Children (Kazdin, Rodgers, & Colbus, 1986)
9. Hamilton Depression Rating Scale for Children (Hamilton, 1960)

DUTY TO WARN PARENTS

There is no question that parents must be notified (Poland, 1989). In addressing this aspect of suicide intervention, four critical questions need to be addressed. First, is the parent available? Second, is the parent cooperative? Third, what information does the parent have that might contribute to the assessment of risk? Fourth, what mental health insurance, if any, does the family possess? *If the parent is available and cooperative and the student is judged high risk,* then the psychologist must provide parent(s) with community referral resources specific to where the family resides and based on health insurance status. The school psychologist should contact the community agency after first receiving parental permission and should provide pertinent referral information and then follow up to ensure that the family had arrived at the community agency. If necessary, assist the parent in transporting the student to the community agency. The psychologist should obtain a parent signature on a release of information form and assist school staff in working with parents to develop a school support plan. All actions must be documented.

If a parent is unavailable and the student is judged high risk, then, at the discretion of the school site administrator, two members of the crisis team should escort the child to the nearest emergency mental health facility and coordinate with the community agency's social services on continuing to contact the parent. Alternatively, school law enforcement, local police, or a mobile psychiatric response team may be asked to assist in transporting the suicidal youth.

Some parents are reluctant to follow through on crisis team recommendations to secure outside counseling for the suicidal child and may simplify or minimize warning signals (e.g., "She's just doing this for attention."). Cultural and language issues are frequent. Give the parents appropriate opportunity and encouragement to follow through before collaborating with crisis team members on when to proceed to the next step. The school crisis team must decide when it is appropriate to report a parent to child protective services if the parent's reluctance is truly negligent and endangers the life of the child. If it is determined that a *parent is uncooperative and the student is judged to be at high risk* for a suicidal behavior, then local law enforcement or child protective services should be contacted and a child neglect and endangerment report made. If *the parent is uncooperative and the student is judged low risk* for suicidal behavior, then it is recommended that the parent sign a "Notification of Emergency Conference" form (Poland, 1995). This form, a sample of which is provided in Figure 3, serves to document that the parents have been notified of their child's suicidal assessment in a timely fashion.

There will be occasions *when a student does not want a parent notified.* When children are thinking of harming themselves, they are not thinking clearly and, therefore, may not be the best judge of what might be their parent's response. The crisis team has only one decision to make: Will the child be placed in a more dangerous situation by notifying the parent? In such a situation, child protective services will typically be notified. The parents must still be notified, and it is the challenge of school personnel to elicit a supportive response from parents. School personnel have been found liable in court for failing to notify parents when their child was suicidal (Poland, 1995; Poland & McCormick, 1999).

The parent often has critical information necessary to make an appropriate assessment of risk. Thus it is critical to *include parents in the risk assessment.* This information may include previous school and mental health history, family dynamics, recent traumatic events in the student's life, and previous suicidal behaviors. Interviewing the parent will also assist the psychologist in making an appropriate assessment of the support system that surrounds this student.

Finally, it is important to determine *what mental health insurance the parent/family has.* This information is essential in directing families to appropriate community agencies. All modern mental health intake interviews include questions regarding insurance coverage, and it is wise for the school psychologist to be aware of the various local providers. If a student is directed to an emergency clinic, then the student may later require emergency transport to an appropriate HMO provider. This may not only further traumatize a suicidal student (because most transports must be done under restraints) but also generate great expense for the parent. It is certainly in the best interest of the child and family to limit the trauma of any student in need of emergency action.

Duty to Provide Referrals

It is critical to stress the importance of identifying and collaborating with community agencies before the crisis occurs. It is recommended that the school crisis team representative call the agency to provide accurate information that the parent may omit. School districts have an obligation to suggest agencies that are non-proprietary or that offer a sliding scale of fees.

Figure 3. **This is a sample of the form used to verify that parents have been informed of their child's suicidal ideation**

I/We____________________________, the parents of______________________, were involved in a conference with school personnel on_________________. We have been notified that our child is suicidal. We have been further advised that we should seek some psychological/psychiatric consultation immediately from the community. School personnel have clarified the district's role and will provide follow-up assistance to our child to support the treatment services from the community.

(Parent or legal guardian)

(School Personnel – Title)

Note: From Poland (1995).

FOLLOW UP AND SUPPORT THE FAMILY

Finally, it is important for school staff to provide ongoing modifications to the student's program, perhaps utilizing student study teams.

Postvention

Schools are frequently not prepared to deal with the aftermath of a suicide, yet few events have greater impact on students, parents, and staff. The primary goal of postvention strategies is to prevent the next suicide. There is considerable scientific evidence that a suicide in the community or exposure to the suicidality in others raises risk in vulnerable children and adolescents. The American Association of Suicidology (1996) and Poland (1989) have provided guidelines to the schools for dealing with the aftermath of a suicide. A summary of these suggestions can be found in Table 5.

Children and adolescents are developmentally at the height of their capacity for imitative behaviors. In addition, there is considerable concern, as well as evidence, for contagion as a result of media reporting of the tragic events that surround a youth's suicide. The American Association of Suicidology also provides guidelines to media and communities to assist in the containment of suicide clusters (CDC, 1992, 1997, 1998). This effort, inevitably, will require a comprehensive collaboration between schools, parents, media, law enforcement, and community agencies.

Legal Issues in Suicide Intervention

Landmark cases, such as *Kelson v. The City of Springfield*, 767 F2nd 651 (1985), have helped to define the responsibilities of schools and their employees when confronted with a suicidal student. School districts have been found liable for not offering suicide prevention programs, for providing inadequate supervision of a suicidal student, and for failing to notify parents when their children were suicidal (*Wyke v. Polk County School Board 11th Cir., 1997*). The liability issues are foreseeability and negligence. That is, if a child writes or talks about suicide, then adults (particularly trained adults such as school psychologists or counselors) should be able to foresee a potential suicide. It is negligent on the part of school not to notify parents/guardians when students are known to be suicidal and not to supervise the student closely (Poland & McCormick, 1999). Even when a student denies suicidal intent, if the collaborative team suspects the child to be suicidal, then the team has an obligation to notify parents (*Eisel v. Board of Education of Montgomery County 597 A.2nd 447 Maryland, 1991*).

Although school district personnel should intervene whenever a child threatens suicide or manifests signs of the intent to commit suicide, most courts have recognized that schools are not equipped to do the necessary in-depth counseling and treatment of children. Rather, the courts hold that school person-

Table 5. General suicide postvention guidelines for the schools

- Plan in advance of any crisis.
- Select and train a crisis team.
- Verify report of suicide from collaboration with the medical examiner, police, and family of the deceased.
- Do not dismiss school or do not encourage funeral attendance during school hours.
- Do not dedicate a memorial (i.e., yearbook, tree, bench).
- Do contribute to a suicide prevention effort on behalf of the schools or community.
- Do contact the family, apprise them of the school's intervention efforts, and assist with funeral arrangements.
- Do not release information in a large assembly or over intercom systems. Disseminate information to faculty, student, and parents. *Always* be truthful.
- Follow the victim's classes throughout the day with discussion and counseling.
- Arrange for counseling rooms in the school building, and provide individual and group counseling.
- Collaborate with media, law enforcement, and community agencies.
- Points to emphasize with media and parents: prevention, no one thing or person is to blame, help is available.
- Provide counseling or discussion opportunities for the faculty.

Note: Poland (1989), American Association of Suicidology (1996).

nel are in a position to make referrals and have a duty to secure assistance from others, with parent involvement, when a child is at risk (Davis & Sandoval, 1991).

Districts have a responsibility for providing adequate staff training in suicide prevention. Litigation against the schools has also occurred on the rare occasion of a suicide completion after a student was disciplined (suspended or expelled). Situational crises as precipitating events have already been discussed in this chapter. The school psychologist can play a significant role in providing adequate training for all school staff and in collaborating with administrators when students are involved in serious discipline procedures.

SUMMARY AND FUTURE PERSPECTIVES

The suicide rate for our nation's youth has reached alarming proportions. Research has revealed that youth suicide transcends all boundaries such as gender, age, ethnicity, geographical location, or socioeconomic status. This chapter has discussed the risk factors and warning signs of youth suicide and has provided the school psychologist with general intervention strategies and a school intervention model.

It is encouraging to note that in 1999 the U.S. Surgeon General, Dr. David Satcher, made suicide prevention a priority by issuing a Call to Action to Prevent Suicide. We hope that he can be successful.

However, both authors have attended meetings in Washington involving our higher governmental officials, and it is difficult to see what has changed. Despite alarming indicators, national and state legislators have virtually ignored the problem of youth suicide and have failed to provide the personnel or resources necessary to mandate suicide prevention programs. Few formal suicide prevention units or programs exist in the nation's schools, but those in Dallas, Los Angeles, and Miami are believed to be exemplary.

As schools continue to be overwhelmed with referrals of depressed and suicidal students, the role of the school psychologist in providing leadership has never been so critical. In the future, school psychologists will be challenged to:

1. Promote primary prevention programs that address at-risk youth such as substance/alcohol abuse, violence, dropout, and pregnancy programs.
2. Assist schools in linking with parents, community law enforcement, and mental health agencies.
3. Advocate for school site crisis teams to implement and collaborate on appropriate intervention and postvention strategies.
4. Provide staff development on youth suicide risks factors, warning signs, and referral processes.
5. Advocate for the mental health needs of students who return to school following expulsion, mental health hospitalization, or other traumatic events.
6. Support programs to reduce accessibility to firearms.

No school or community should have to suffer the devastation, confusion, uncertainty, and shock that occur in the aftermath of a suicide. It was Gandhi who said, "Be the difference that you want in the world." School psychologists can make a difference in suicide prevention.

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Wealth of information on youth suicide prevention and intervention; Journal with membership: *Suicide and Life Threatening Behavior*; *Suicide Postvention Guidelines* (2nd Ed.) (1999) provides suggestions for dealing with the aftermath of suicide in the schools. Media and community guidelines for the containment of suicide clusters.

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73 Best Practices in the Assessment of Adaptive Behavior

Patti L. Harrison
Tracy L. Boney
The University of Alabama

OVERVIEW

Adaptive behavior assessment has been emphasized for many years in the definition, diagnosis, and classification of mental retardation. Chapters in previous editions of *Best Practices in School Psychology* have called for the application of the construct of adaptive behavior to assessment and intervention for all students with disabilities (Harrison & Robinson, 1995; Reschly, 1985, 1990). Every person must use daily adaptive skills to function effectively and independently. A person who has deficits in their adaptive skills can experience problems in meeting the various demands of many environments and situations. Children who have major deficits in adaptive skills may have difficulties with important life activities, including interacting with peers, taking care of personal needs, learning new skills, and general functioning in the home, school, and community. Comprehensive assessment of children's adaptive skills by school psychologists is important for identifying children's strengths and needs and for focusing on important goals for intervention programs. The purpose of this chapter is to provide current information about adaptive behavior assessment, including perspectives, assessment methods, and research findings with practical implications for practice in school psychology. The chapter presents adaptive behavior assessment as an important component in data-based decision making for children with disabilities and other learning and behavior problems.

The following sections provide the foundation for using adaptive behavior assessment in decision making: definition and characteristics of adaptive behavior, historical perspectives, current perspectives of diagnosis and classification systems, and adaptive behavior assessment linked to interventions of functional skills.

Definition and Characteristics

Adaptive behavior refers to everyday coping with environmental demands and includes the skills in daily living that people perform to care of themselves and relate to others (Grossman, 1983). The American Association on Mental Retardation (AAMR, 1992) emphasized that adaptive behavior includes an array of important competencies and identified 10 specific areas of adaptive skills: communication, self-care, social, community-use, self-direction, health and safety, functional academics, home living, leisure, and work. The AAMR focused on "adaptive skills," rather than the more global "adaptive behavior." According to the AAMR manual on definition and classification,

> [A]daptive skill limitations often coexist with strengths in other adaptive skills or other areas of personal competence, and the existence of these limitations and strengths in adaptive skills must be both documented within the context of community environments typical of the individual's age peers and tied to the person's individualized needs for support (AAMR, 1992, p. 39).

Adaptive skills have several general characteristics, as summarized by AAMR (1992) and Harrison

(1990). Adaptive skills demonstrate situational specificity, or the ability of a person to match skills to the current environment and to change behavior to fit the specific demands of any situation. Thus, children's adaptive skills are influenced by the demands of specific situations and environments, including home, school, community, and workplace, and by the expectations of important people within the environments. Another concept is the developmental relevance of adaptive skills. Adaptive skills develop across the age range and are associated both with the growth in children's abilities and with the expanded and more complex demands of important environments. Adaptive skills of infancy, early childhood, elementary school years, adolescence, and adulthood are quite different and reflect the development and expectations of individuals in the different age ranges.

The AAMR emphasized that cultural, linguistic, communication, and behavioral factors are important components of a person's adaptive skills. An important assumption about adaptive skills is that with appropriate supports and interventions for a person's adaptive skill deficits, life functioning will generally improve. The general characteristics of adaptive skills listed above illustrate that data-based decision making for adaptive skills must take into account (a) the requirements in a person's specific environments; (b) the developmental expectations for the person's age group; (c) the person's culture and linguistic characteristics, communication skills, and problem behaviors; and (d) the supports and interventions that are needed to improve the person's functioning.

The concept of adaptive behavior has been incorporated into broader models of general competence or personal competence. The Greenspan model of competence has been the most widely utilized. According to one of the latest descriptions of the Greenspan model (Greenspan & Driscoll, 1997), general competence consists of the following:

1. Physical competence, including organ and motor competence

2. Affective competence, including temperament and character

3. Everyday competence, including social and practical intelligence

4. Academic competence, including conceptual intelligence and language

Adaptive skills are important components within everyday competence. The construct of conceptual intelligence, or the skills measured by traditional intelligence tests, is distinguished from everyday competence.

Historical Perspectives

Historically, adaptive behavior assessment has been applied widely in the field of mental retardation. Deficits in adaptive behavior, in addition to subaverage intellectual functioning, were included in the first definition of mental retardation by the American Association on Mental Deficiency in 1959 (Heber, 1961), now called the AAMR, and have been included in every official definition since. Special education legislation, beginning with the Education for All Handicapped Children Act in 1975 and continuing with the current Individuals with Disabilities Education Act (IDEA) and its 1997 re-authorization, also defined mental retardation in terms of limitations in intelligence and adaptive behavior.

Concerns about bias in intelligence testing and use of intelligence test scores to classify children in special education programs have resulted in a number of court cases with implications for adaptive behavior assessment. The use of intelligence tests to classify minority children as having mental retardation and the disproportionate numbers of minority children in special education programs for mental retardation led to a number of lawsuits in the 1960s, 1970s, and 1980s. Although the outcomes of cases such as *Larry P v. Riles* and *Marshall v. Georgia* differed in their opinions about bias in intelligence tests, all cases placed great emphasis on the importance of assessing adaptive behavior in the classification and diagnosis of mental retardation.

The 1960s and 1970s also saw increased emphasis on the use of adaptive behavior assessment for planning and implementing interventions for individuals with mental retardation. Large numbers of individuals in residential facilities for mental retardation were, as a result of many lawsuits, transitioned to less restrictive, community programs. Adaptive behavior assessment became important to identify strengths and limitations in adaptive skills and to plan needed interventions for persons leaving a residential facility and entering a community program.

Current Perspectives

DIAGNOSIS AND CLASSIFICATION

Criteria for diagnosing and classifying mental retardation emphasize adaptive behavior. Three definitions of mental retardation currently are used for children and adults: the AAMR (1992) definition, the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) (American Psychiatric Association, 1994) definition, and the definition in the regulations of the Individuals with Disabilities Education Act (IDEA) Amendments of 1997 (1999). Table 1 reports the three definitions.

The 1992 AAMR manual on mental retardation included some changes from previous editions and has been met with some controversies. According to Gresham, MacMillan, and Siperstien (1993, 1995), the current AAMR manual increases the IQ cutoff score to 75 in comparison to a score of 70 used in the previous edition. One concern regarding this change is the possibility of the increase in the number of individuals eligible for the diagnosis of mental retardation. The change in IQ score could also lead to the potential for renewed overrepresentation in programs for children with mental retardation, especially for minority children (Gresham et al., 1993, 1995; Matson, 1995). A second change in the current AAMR definition from previous versions is the identification of 10 adaptive skill areas and an emphasis on limitations in at least 2 of the 10 adaptive skill areas for a diagnosis of mental retardation. However, the AMMR does not specify a criterion or cut-off score for an adaptive skills limitation (Matson, 1995). The current AAMR definition also eliminated the classification of levels of mental retardation (mild, moderate, severe, and profound) and, instead, identifies four possible intensities of needed supports for individuals with mental retardation: intermittent, limited, extensive, and pervasive. Vig and Jedreysek (1996) expressed concern that the elimination of levels of impairment may restrict family understanding of a child's disability and predictions about a child's rate of progress and response to intervention.

In response to the criticisms about the current definition of mental retardation, Luckasson, Schalock, Snell, and Spitalnik (1996) and Reiss (1994) noted that the current, 1992, definition of mental retardation by the AAMR emphasizes a new "support" model of mental retardation, instead of a deficiency model. In addition, they argue that the new definition provides a more flexible role for professional decision making by providing an upper limit range of 70–75 for IQ scores to be used in the diagnosis of mental retardation and not by setting specific scores for adaptive skills limitations. Most important, the cur-

Table 1. Definitions of mental retardation

Source	*Definition*
American Association on Mental Retardation (1992)	"Mental retardation refers to substantial limitations in present functioning. It is characterized by significantly subaverage intellectual functioning, existing concurrently with related limitations in two or more of the following applicable adaptive skill areas: communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure, and work. Mental retardation manifests before age 18" (p. 5).
American Psychiatric Association (1994)	"The essential feature of Mental Retardation is significantly subaverage general intellectual function (Criterion A) that is accompanied by significant limitations in adaptive functioning in at least two of the following skill areas: communication, self-care, home living, social/interpersonal skills, use of community resources, self-direction, functional academic skills, work, leisure, health, and safety (Criterion B). The onset must occur before age 18 years (Criterion C)."
Individuals with Disabilities Education Act Amendments of 1997 (1999)	"Mental retardation means significantly subaverage general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, that adversely affects a child's educational performance" (p. 12422).

rent AAMR definition focuses on the interaction of a person's characteristics and his or her environments.

As seen in Table 1, the DSM-IV (American Psychiatric Association, 1994) definition is similar to the AAMR (1992) definition. The main criteria for mental retardation in DSM-IV are subaverage general intelligence accompanied by limitations in adaptive functioning in two adaptive skills areas. However, unlike the AAMR criteria, subaverage intelligence is operationalized as an IQ score of approximately 70 or below in the DSM-IV. The DSM-IV also maintains the degrees of severity of mental retardation (mild, moderate, severe, and profound), in contrast to the AAMR use of intensities of support (intermittent, limited, extensive, and pervasive)

In addition to the definitions provided by the AAMR and DSM-IV, mental retardation is a qualifying disability for special education under the IDEA Amendments of 1997. Similar to other definitions, IDEA defines mental retardation as subaverage intelligence existing concurrently with deficits in adaptive behavior, as noted in Table 1. IDEA describes mental retardation as manifested during the developmental period and negatively affecting a child's educational performance. Unlike the AAMR and DSM-IV, the IDEA definition has a broad focus upon adaptive behavior rather than a list of specific adaptive skill areas and does not require deficits in at least 2 of 10 adaptive skill areas.

IDEA Amendments of 1997 also emphasize the importance of adaptive behavior assessment in the definition of developmental delay and identification of needs for services for children experiencing developmental delays. For children aged 3–9, states and local school districts may identify developmental delays in one or more of the following areas: physical development, cognitive development, communication development, social or emotional development, or adaptive development.

ASSESSMENT LINKED TO INTERVENTIONS FOR FUNCTIONAL SKILLS

Assessment of adaptive skills should be an integral part of school psychologists' data collection about children's skills and behaviors in multiple environments. Data from adaptive behavior assessment should be used, along with data from other sources and about other behavior domains, to design, implement, and monitor interventions. The current chapter is based on the ideal that goals of assessment and intervention for children with learning and behavior problems or disabilities should include increases in the daily adaptive skills needed to function more effectively and independently. Although adaptive behavior assessment is a required component of the assessment of children with disabilities such as mental retardation and developmental delays, school psychologists should not use adaptive behavior assessment to merely document a diagnosis. Comprehensive adaptive behavior assessment has implications for important interventions for all children experiencing problems. School psychologists should use adaptive behavior assessment data to plan interventions that actually improve children's independence and expand children's skills.

The AAMR (1992) manual, as well as other resources, focused upon adaptive skills as functional daily living skills that represent important goals of training and interventions. Functional daily living skills are skills that are frequently used during an individual's daily routine and that occur naturally in home, school, work, and community environments (Schleien, Green, Heyne, 1993). Acquisition of functional skills allows an individual to be independent in important environments and settings. Assessment of functional skills should include (a) identification of the individual's strengths, (b) evaluation of the skills needed in the environments in which the person currently participates, and (c) analysis of the skills needed to function in the next, least-restrictive environment to assist in transition. For example, functional skills needed in a preschool setting may be different from skills needed in an elementary school. Assessment requires evaluation of the child's current skills, the skills needed in the preschool setting, and the skills needed in the elementary setting. For an older adolescent student, the demands of the high school setting may be quite different than the demands of the work setting that the student will enter following high school. Assessment requires analysis of the students skills, the high school setting, and the work environment.

The AAMR (1992) addressed the need for assessment of an individual's level of functional skills and identification of supports and services that can be used for an intervention related to functional, daily-living skills. The AAMR recommends that the purpose of assessment should be determined before assessment (e.g., to measure progress of an intervention). Once the function is determined, then a broad assessment should be planned and conducted and assessment information should be analyzed. The assessment can be conducted through a number of methods, including the use of structured interviews, norm-referenced adaptive behavior scales, and direct observation. The assessment information should be translated into a description of needed supports to provide interventions for the student's limitations and weaknesses. While these supports and interventions are being delivered, the student's progress should be monitored for progress or any needed modifications in the intervention.

Interventions to increase functional, daily living skills require prioritizing of goals for interventions. The first step in assessment for identifying intervention priorities is to determine whether the child actually has the skill and chooses not to use it or whether the skill is not in the child's repetoire of behaviors. The next step is to determine if a discrepancy exists between the actual skills of the child and the expected performance in the child's current or next environments, and to then evaluate whether this discrepancy is socially significant in terms of quality of life for the child (AAMR, 1992). The highest priorities for interventions are these skills that have the most social significance for the child.

Depending on the needs and developmental levels of children, different functional skills may be targeted for intervention. For example, interventions for children with milder disabilities in the elementary school tend to focus more on readiness skills such as following directions, developing self-help skills, and interacting with peers. Young children may benefit from interventions that expose them to association with other children in the regular classroom and are more performance-oriented. For children with more severe disabilities, goals for functional skills typically revolve around preparing them to live life as independently as possible. Intervention goals for older children may focus more on functional academics and functional pre-vocational skills. For students leaving secondary programs, transition goals may include adaptive skills needed in job training programs and the workplace. Dunn (1997) concluded that postschool outcomes can be improved for young adults with appropriate assessment and planning for transition.

Several types of interventions have been shown to be effective for increasing functional skills, including the following: modeling, in which the student duplicates a task performed by another person; behavior rehearsal, in which the student practices a learned task over and over; and coaching procedures, which use direct verbal instruction with discussion of the desired behavior (Elliott, Sheridan, & Gresham, 1989). Interventions for older students may include community-based instruction. McDonnell, Hardman, Hightower, Kelfer-O'Donnell, and Drew (1993) found that community-based instruction is an effective technique for generalization of classroom-learned skills to natural settings. Other interventions that may be effective with older students include problem-solving training and self-motivational methods, such as self-instruction, self-management, and self-monitoring (Hughes, 1992; Misra, 1992). The AAMR emphasized that, "Rather than simply scheduled for instruction in discrete blocks of time, basic motor, language, and social skills are taught as they occur or are needed, naturally embedded within routine activities (AAMR, 1992, p. 131).

BASIC CONSIDERATIONS

Assessment Methods

A number of different methods can be used to assess adaptive behavior, including traditional, norm-referenced rating scales, and alternative methods.

NORM-REFERENCED INSTRUMENTS

There are a number of standardized, norm-referenced adaptive behavior scales. Table 2 contains brief descriptions of several instruments that are used in school settings. The norm-referenced assessment instruments listed in Table 2 are rating scales used primarily with parents and teachers as informants about children's adaptive skills. Norm-referenced rating scales have a number of advantages in the assessment of daily, adaptive skills. They focus on adaptive skills that occur in naturalistic settings, such as home, school, and community, and they provide comprehensive assessments of a large number of adaptive skills. They obtain information from multiple perspectives and multiple sources of information and include important individuals, such as parents and teachers, in the assessment process. They provide a developmental reference for children's adap-

Table 2. Examples of norm-referenced adaptive behavior scales for use with children in school settings

Scale	*Forms and ages*	*Major areas assessed*	*Norm samples*
Vineland Adaptive Behavior Scales (Sparrow et al., 1984a, 1984b, 1985)	• Survey Form and Expanded Form: Used with parents of children birth through age 18 and low functioning adults. • Classroom Edition: Used by teachers of children ages 3–12.	• Communication, Daily Living Skills, socialization, and Motor Skills.[a] • Adaptive Behavior Composite.	• Standardization samples of children with typical functioning. • Clinical norm samples and validity studies for samples of individuals with mental retardation in residential and non-residential facilities and children with hearing and visual impairments and emotional disturbances in residential facilities.[b]
Adaptive Behavior Scale-School (2nd ed.) (Lambert, Nihira, & Leland, 1993)[c]	• Informants for children aged 3–21.	• Personal Self-Sufficiency, Personal-Social Responsibility, Community Self-Sufficiency, Social Adjustment, and Personal Adjustment.[a,d]	• Standardization samples of individuals with mental retardation and those without mental retardation.
Adaptive Behavior Evaluation Scale-Revised (McCarney, 1995a, 1995b)	• Home Version: Used by parents of children ages 5–18. • School Version: Used by teachers of children ages 5–18.	• Ten specific areas of adaptive functioning as identified by the AAMR • Adaptive Skills Quotient	• Standardization samples of individuals with typical functioning. • Validity study samples included individuals with mental retardation.
Scales of Independent Behavior, Revised (Bruininks et al., 1996)	• Informants for individuals infancy through adulthood.	• Motor Skills, Social Interaction and Communication Skills, Personal Living Skills, and Community Living Skills clusters.[a] • Broad Independence Score.	• Standardization samples of individuals with typical development. • Validity studies samples included individuals with mental retardation and behavior disorders and children receiving different levels of educational services (regular classroom, special education classroom, or special education school).
Adaptive Behavior Assessment System (Harrison & Oakland, 2000)	• Parent Form: Used by parents children ages 5–21. • Teacher Form: Used by teachers of students ages 5–21. • Adult Form: Used by informants of adults ages 16 and older.	• Ten specific areas of adaptive functioning as identified by the AAMR. • General Adaptive Composite.	• Standardization samples of individuals with typical functioning. • Validity study samples included individuals with mental retardation, learning disabilities, autism, attention deficit hyperactivity disorder, and emotional or behavioral disorders.

[a] The Vineland, Adaptive Behavior Scale, and Scales of Independent Behavior also include an assessment of maladaptive behavior.

[b] Supplementary norms were developed by Carter et al. (1998) for use with individuals with autism.

[c] The Adaptive Behavior Scale, Residential and Community (2nd ed.) (Nihira, Leland, & Lambert, 1993) rating scale is available for informants for adults with mental retardation.

[d] Byrant, Taylor, and Rivera (1996) developed an instrument, the Adaptive Areas Assessment, which is a recategorization of the Adaptive Behavior Scale items into the ten adaptive skill areas identified by the AAMR.

tive skills by comparing the adaptive behavior ratings for the targeted child and a norm group of children the same age.

LIMITATIONS OF NORM-REFERENCED SCALES AND ALTERNATIVE ASSESSMENT METHODS

In spite of the advantages of rating scales in assessing adaptive behavior, rating scales have a number of limitations that should be taken into account in adaptive behavior assessment, and rating scales should be supplemented with other data collection procedures (Gresham & Elliott, 1990). For example, ratings of informants may simply provide an assessment of the informant's perceptions of a relative summary of the individual's general adaptive behavior, instead of an exact frequency of behaviors. Rating scales may be limited to skills that can be assessed through a rating scale or questionnaire completed by an informant and may not assess all possible adaptive skills. Respondents' ratings on the scales may reflect their own expectations and standards for adaptive skills, and the expectations may differ between respondents and between settings. Respondents also may be influenced by characteristics of the client, including appearance, ability, academic performance, and background.

School psychologists should integrate multiple methods of assessment and collect data from multiple sources of information, given the limitations of norm-referenced rating scales. Alternative methods that may be useful in a comprehensive assessment of adaptive behavior include informal interviews, structured observations, social skills assessment, and sociometric techniques. Parents, teachers, supervisors, and others, as well as children themselves, should serve as sources of information in data collection about adaptive behavior.

Structured, naturalistic observations focus on direct and systematic observation of an individual in a setting, such as the classroom, home, playground, and place of work (see Hintze, Volpe, and Shapiro, this volume). Social skills assessment provides identification of important acquisition and performance deficits that may be affecting children's social interactions (see Gresham, this volume). Sociometric techniques, such as peer rating and peer nominations, can be useful in determining the impact of adaptive behavior deficits on the perceptions of peers. Another assessment technique, direct testing of a client's adaptive skills, may provide objective data about what a child is able to do in a structured testing environment and can supplement rating scales and their focus on an informant's perception of what a child does.

Research suggests that correlations between parent and teacher ratings of individuals' adaptive skills are low to moderate. Research findings suggest that correlations between parent and teacher ratings are higher when disabilities are more severe, but even for children with severe disabilities, parent and teacher scores on adaptive behavior scales may differ significantly (Hundert, Morrison, Mahoney, Mundy, & Vernon, 1997; Voelker, Shore, Hakim-Larson, & Bruner, 1997). The research suggests that both parents and teachers should be used in adaptive behavior assessment and that evaluation of the reasons for differences between parent and teacher ratings would have great value in decision making and planning interventions. Informal interviews with significant others, including parents and teachers, may provide information about factors that may be related to children's adaptive behavior and may impact parent and teacher ratings on adaptive behavior scales. For example, different parenting and teaching styles and expectations or children's behavioral inconsistencies across settings may affect adaptive behavior ratings.

School psychologists should focus on integrating data from multiple methods of assessment and data collection and multiple sources of information in order to obtain the most valid data possible for decision making and planning interventions. For example, a combination of norm-referenced rating scales and informal interviews with parents and teachers may reveal that a child has strengths in self-care skills and weaknesses in communication and self-direction at both home and school. However, parents may report that a child has adequate social skills at home and in the community, and teachers may report that the child has social skills problems in the classroom. Additional interviews with the parents, teachers, and child and systematic observation in the classroom may suggest that the child has fewer social interactions than a typical peer in the classroom and that the limited and infrequent social interactions of the child are characterized by hostile behavior (e.g., raised voice, name calling, shoving) between the child and peers. Thus, the example briefly illustrates the comprehensive nature of the adaptive behavior data provided by multiple assessment methods and sources of information and the implications of the integrated data for prioritizing interventions.

Practical Implications of Research

Much research has been conducted with adaptive behavior assessment. The research findings about the relationship between adaptive behavior and intelligence and the adaptive behavior strengths and limitations of children with disabilities have important implications for school psychologists.

ADAPTIVE BEHAVIOR AND INTELLIGENCE

Given the requirements to assess both adaptive behavior and intelligence for the diagnosis of mental retardation, many studies have investigated the relationship between scores on adaptive behavior and intelligence measures. The majority of the findings demonstrate moderate correlations between the scores from adaptive behavior and intelligence scales, although there is some evidence (e.g., Bruininks, Woodcock, Weatherman, & Hill, 1996; Vig & Jedrysek, 1995) to suggest that the correlations are higher for individuals with more severe disabilities and may vary for different domains of adaptive behavior. The generally modest correlations support the conclusion that adaptive behavior and intelligence are distinct but related constructs. For example, Keith, Fehrmann, Harrison, and Pottebaum (1987) investigated several possible models for the relationship between adaptive behavior and intelligence. Results supported the model that adaptive behavior and intelligence are separate but related constructs.

The AAMR (1992) noted that, although intelligence and adaptive behavior should be applied equally when making decisions about diagnoses of mental retardation, intelligence test scores have been over-emphasized in professional decision making. The AAMR stressed that there should be a balanced consideration of adaptive skills and intelligence measures. The moderate correlations between adaptive behavior and intelligence scales suggest that scores from the two types of scales will provide distinct types of information. Greenspan and Driscoll's (1997) distinction between everyday competence and academic competence supports the importance of considering everyday skills, as assessed by adaptive behavior scales, and academic competence, as measured by conceptual IQ tests.

ADAPTIVE SKILLS OF CHILDREN WITH DISABILITIES

Children with mental retardation, autism, and other disabilities often are assessed with adaptive behavior assessment measures for diagnosis of the disabilities, evaluation of strengths and weaknesses, and determination of needs for intervention. A number of research studies have investigated the adaptive skills of children in different disability categories.

Mental Retardation. As noted throughout this chapter, deficits in adaptive skills are necessary for diagnosis and classification of mental retardation. Research indicates that individuals with disabilities do have important adaptive skills deficits. Research reported in the manuals for the Vineland Adaptive Behavior Scales (Sparrow, Balla, & Cicchetti, 1984a) and Scales of Independent Behavior-Revised (Bruininks et al., 1996) indicate that individuals with mental retardation have adaptive behavior scores lower than those of individuals with no disabilities. The research also suggests that individuals with moderate to severe mental retardation living in residential facilities have lower adaptive skills than those with mild to moderate mental retardation living in non-residential facilities. Dykens, Hodapp, and Evans (1994) examined the profile of adaptive behavior for children with Down syndrome and found that the children had a weakness in communication relative to daily living and socialization skills. There was also a significant difference between the expressive and receptive abilities in the communication domain. Children with Fragile X syndrome demonstrated weaknesses in adaptive behavior in communication and socialization (Freund, Peebles, Aylward, & Reiss, 1995; Bailey, Hatton, & Skinner, 1998). Bailey et al. (1998) also found that assessment of children with Fragile X syndrome demonstrated strength in the area of motor skills in relation to their weaknesses in communication and cognition.

Autism. Children with autism may have a number of developmental difficulties, including deficits in communication and social interactions, and may exhibit repetitive or stereotyped activities and resistance to change. Research has demonstrated that children with autism typically have weaknesses in the area of socialization when compared with children with mental retardation or typical development (Carpentieri & Morgan, 1996; Loveland & Kelly, 1991;

Rodrigue, Morgan, & Geffken, 1991; Stone, Ousely, Hepburn, Hogan, & Brown, 1999; Vig & Jedrysek, 1995). Individuals with autism also demonstrate a weakness in the adaptive domain of communication (Stone et al., 1999; Vig & Jedrysek, 1995). In addition to specific strengths and weaknesses, Rodrigue et al. (1991) also found that children with autism typically demonstrated overall greater variability in social skills. The research findings support the suggestions of Shriver, Allen, and Mathews (1999) that core areas of assessment and interventions for children with autism should include social competence, play and leisure skills, and self-help/independent living skills.

Other Disabilities. Because many disabilities and disorders can affect adaptive functioning, adaptive skills assessment may be important for identifying strengths and weaknesses of daily functioning for disabilities in addition to mental retardation and autism. For these other disabilities and disorders, it is important to assess adaptive functioning in order to assist with planning appropriate interventions.

Sparrow et al. (1984a) reported that children with emotional disturbances in residential facilities had adaptive behavior scores well below the normative average on the Vineland, and Bruininks et al. (1996) reported that children with behavior disorders demonstrated more maladaptive behaviors on the Scales of Independent Behavior-Revised than did a normal control group. Sparrow and Cicchetti (1987) examined the research related to adaptive and maladaptive functioning of children with emotional disturbances and concluded (1) the severity of adaptive behavior deficits tend to increase with the severity of the disturbance, (2) children with emotional disturbances typically demonstrate the most significant adaptive skill deficits in the areas of socialization and maladaptive behavior, and (3) score patterns in areas such as communication and daily living skills tend to be unpredictable.

Voelker et al. (1997) reported adaptive skills deficits for children with multiple disabilities in cognitive, sensory, and motor areas, and Sparrow et al. (1984a) found adaptive behavior scores well below the normative mean for children with hearing and visual impairments in residential facilities. Given the heterogeneous nature of children with low incidence disabilities, such as sensory or physical disabilities, it is more important to focus on the benefits of adaptive behavior assessment rather than typical adaptive behavior profiles. Many children with sensory or physical disabilities may experience few deficits in adaptive skills. Adaptive behavior assessment for children with physical disabilities, in combination with assessments from other areas such as speech and physical therapy, may offer the most useful information for school psychologists. Although adaptive skills assessment of individuals with hearing and visual impairments may not be necessary for diagnosis or classification of the disability, assessment of their daily adaptive skills may assist in identifying needed goals and supports.

BEST PRACTICES

What follows are eight highlights:

1. School psychologists should consider the routine incorporation of adaptive behavior assessment into a comprehensive data-based decision making framework of providing services for children. Adaptive behavior assessment should be viewed an integral factor in assessment and interventions for daily, functional skills. School psychologists should emphasize that the primary goals of adaptive behavior assessment are to identify needs and develop plans for interventions that enable children to improve their independence and expand important life skills.

2. A number of published, norm-reference adaptive behavior rating scales are available for use by school psychologists and are useful components of comprehensive adaptive behavior assessment. School psychologists should carefully select the scale(s) to be used based on the individual child's needs for assessment and the specific information provided by the scales.

3. Adaptive behavior ratings scales have useful characteristics, but have a number of limitations that should be addressed during decision making. School psychologists should take into account limitations such as the rating scale's reflection of a relative summary of the individual's general adaptive behavior, instead of an exact frequency of behaviors, when respondents rate items. School psy-

chologists must evaluate the impact of respondents' expectations, standards, and perceptions on their adaptive skill ratings of children.

4. School psychologists should use multiple methods of adaptive behavior assessment, given the limitations of norm-referenced rating scales. Methods such as informal interviews, structured observations, social skills assessment, and sociometric techniques, are valuable during adaptive behavior assessment in order to obtain more detailed information about strengths and weaknesses in a variety of settings and to plan and monitor interventions.

5. Information from both parents and teachers should be used in adaptive behavior assessment of a child. Research suggests that parents and teachers may disagree in their adaptive behavior ratings, perhaps because of differing perceptions or expectations of the two informants or actual inconsistencies in the child's behavior across two different settings. Discrepancies between parents and teacher can be of great clinical value in assessment and planning interventions, and discrepancies can be followed by informal interviews with parents and teachers to explore the reasons for the discrepancies.

6. School psychologists should collaborate and integrate adaptive behavior data collected by using multiple assessment methods and sources of information and should never rely only on norm-referenced rating scales. Valid decision making and development of effective interventions require the use of comprehensive, integrated data, instead of a single source of information or assessment method.

7. School psychologists must always use a balanced consideration of adaptive behavior and intellectual assessment results when making decisions about a mental retardation classification. An over-emphasis on intelligence test scores violates legal and professional guidelines and does not meet the needs of children. In addition, research has demonstrated that intelligence and adaptive behavior are distinct, but related, constructs; and consideration of both everyday competence and conceptual intelligence should be included in decision making for children.

8. Although adaptive behavior assessment is required for the diagnosis of mental retardation and has many implications for interventions for individuals with mental retardation, it has many important uses in the assessment and intervention for other children. School psychologists should incorporate comprehensive adaptive behavior assessment into the assessment and data collection plan for all children experiencing learning and behavior problems and difficulties in functional, daily living skills. Many children who are experiencing problems have concurrent deficits in adaptive skills. Increases in adaptive skills represent important intervention goals for many children.

SUMMARY

This chapter has described adaptive behavior assessment as a component of data-based decision making by school psychologists. The current perspective provided by the AAMR (1992) provides a framework for assessing adaptive skills in order to gather information about an individual's functional limitations and needs for services. The primary goal of adaptive behavior assessment should be to plan and monitor interventions for students. A number of norm-referenced rating scales of adaptive behavior are available, and they have many advantages, but a number of limitations. Rating scale assessment should be supplemented with interviews, naturalistic observations, and other techniques for comprehensive adaptive behavior assessment. Research suggests that adaptive behavior and intelligence are distinct, but related, constructs, and supports the need to gather data about both everyday competence and conceptual intelligence. Adaptive behavior assessment is required for individuals before they can receive a diagnosis of mental retardation, but also has important uses for assessment and interventions for children with other disabilities, including children with autism, emotional or behavior disorders, and physical or sensory disabilities.

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The best practices chapter continues to be one of the best resources on adaptive behavior assessment, owing to the outstanding discussion of key issues and the practical recommendations.

Taylor, R. L. (Ed.), *Assessment of individuals with mental retardation*. San Diego, CA: Singular.
In addition to the chapters on intelligence testing and adaptive behavior assessment, this edited text includes outstanding chapters on early childhood assessment and transition assessment for adolescents with mental retardation.

ARTICLES

Series of articles criticizing the 1992 AAMR definition of mental retardation and responses from the team that developed the 1992 definition. A review of the articles will allow school psychologists to explore the key and controversial issues in the field of mental retardation. Outstanding articles include:

Gresham, F. M., MacMillan, D. L., & Siperstein, G. N. (1993). Conceptual and psychometric concerns about the 1992 AAMR definition of mental retardation. *American Journal on Mental Retardation, 98*, 3325–3335.

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Best Practices in Promoting Safe Schools

Caven S. Mcloughlin, Robert J. Kubick, Jr., and Melissa Lewis

Kent State University

OVERVIEW

Episodes of school violence occurring in the 1990s and in 2000 have brought violence prevention and intervention strategies to the forefront of every school community's attention. School violence is a topic sensationalized in the media resulting in increasing concern by the general public (Hyman & Perone, 1998a). Contrary to popular perception, the level of violence in schools has largely been stable since the mid-1980s and actually has declined in recent years (Kingery, Coggeshall, & Alford, 1998). In general, school crime data do *not* support the notion that schools are fundamentally violent and unsafe places for students (Hyman & Perone, 1998a). In fact, available data support a contention that typical schools are far from the dangerous and disorderly places that are portrayed by media reports (Hyman & Perone, 1998a ; Hyman, Weiler, Dahbany, Shanock, & Britton, 1996; Miller, 1994). Perceptions that violence is rampant in the nation's schools are not based on verified facts and sometimes have been exaggerated to promote personal gain (Furlong & Morrison, 1994). The perception of schools as unsafe places largely reflects the alarmist images created to portray popular notions of what is "right" or "wrong" about schools and is driven by popular reporting rather than reliance on empirical data (Salkind et al., 2000).

Nonetheless, where a widespread perception prevails, professionals become appropriately concerned. Since school psychologists are likely to be among the only school professionals with training both in atypical behaviors and in developing prevention and intervention programs, it is meaningful for school psychologists to play a central role in the development of safe school plans.

Safe schools, those with a positive school climate, promote optimal academic achievement for all. The National Association of School Psychologists (NASP) promotes the development of effective, safe schools through many forums. NASP has partnered with education, governmental, and mental-health organizations to publish a safe schools guide (*Early Warning, Timely Response*, by Dwyer, Osher and Warger (1998) an implementation manual (*Safeguarding our Children: An Action Guide*, by Dwyer and Osher (2000), and, most recently, *Preventing School Problems—Promoting School Success: Strategies and Programs That Work* (Minke & Bear, 2000), each of which discuss proven prevention programs and specific strategies for at-risk students. Additionally, NASP jointly operates (with the National Mental Health Association) the Safe Schools Healthy Students Action Center, the National Emergency Assistance Team (NEAT) (Helping Schools, Families and Communities Cope with Crisis), and the National Mental Health and Education Center for Children and Families, and provides guidelines for the responsible coverage of school violence to media professionals (all accessible at http://www.naspweb.org).

Incidents of violent behavior are a pervasive concern for school officials, students, and their families. Regrettably, one consequence of the misperception that school violence is on the rise is that schools increasingly have adopted law enforcement rather than educational models to prevent misbehavior

(Hyman & Perone, 1998a). In fact, there is a paucity of evidence supporting the efficacy of most law enforcement prevention efforts, such as metal detectors, increased police presence, searches, identification cards, school uniforms, and boot camps. Furthermore, these law enforcement remedies are often more difficult and expensive to enact than are *educational* programs (American Psychological Association, 1993; Hyman & Perone, 1998b).

Children, particularly minority children, are overrepresented as victims of violence across school and community settings. As settings that house children for a significant portion of their growing years, schools are placed in the position of being legally accountable for ensuring student safety. This is a daunting task that cannot be accomplished by the school alone (Kingery et al., 1998). Sadly, the reluctance of many educators to take ownership of the problem of school violence compounds the problem of keeping students safe (Morrison, Furlong, & Morrison, 1994).

Stephens (1994) contends that it is impossible to complete any of the goals listed in the National Education Agenda Goals 2000 until goal 7 is first accomplished. The seventh National Education goal states that, "By the year 2000, every school in the United States will be free of drugs, violence, and the unauthorized presence of firearms and alcohol and will offer a disciplined environment conducive to learning" (National Education Goals Panel, 1999). Patently, this goal was not achieved by its target date despite the significant political, educational, and financial resources invested. Past and future efforts expended in creating and maintaining safe schools are nonetheless worthwhile. They represent an investment at the individual level and the value of saving even one child from unsafe circumstances is incalculable. If it is accepted that antisocial behavior is largely a learned phenomenon—and thus not an inevitable consequence of childhood regardless of the nurture-characteristics of the child's environment — then school psychologists have an important role to play in "establishing safe environments by developing curricula that focus on violence prevention and reduction of aggression" (Talley, 1995, p. 17). School psychologists have a vital role to play in meeting goal 7 of Goals 2000.

School psychologists can be engaged in developing, implementing, and maintaining safe school plans. This involvement includes facilitating school climate reform, implementing social skills and conflict resolution programs, developing violence prevention and intervention programs, and intervening with victims and perpetrators and responding to crisis situations. This chapter considers the policies and practices that characterize safe schools and recommends procedures for implementing these practices into schools.

BASIC CONSIDERATIONS

Creating a Positive School Climate

Safe schools begin with a positive school climate, one that has the academic achievement of all its students as its central focus. Through school-wide policies and practices, and within every classroom and curriculum, students receive the message that while each child is unique, all are capable of academic achievement and responsible behavior. Safe schools communicate a sense of equal respect for all students.

One of the most important arenas in which this message is communicated to students is in the classroom, through teacher modeling of appropriate behaviors and through the explicit teaching of citizenship and social skills. Safe schools devote inservice training time to the use of prosocial skills in the classroom. In turn, teachers in safe schools incorporate positive themes into their teaching by integrating model conflict resolution, cooperation, respect and responsibility, and problem-solving skills into their lessons.

On a system-wide basis, safe schools are sensitive to the diversity of their students, and this sensitivity is reflected in school policies, programs, and interventions. Further, safe schools incorporate multicultural themes into the curriculum that may help foster a sense of tolerance for diversity. In so doing, many schools have sought to make character education a part of the curriculum in order to promote cooperation, responsibility, and democracy within the school. Such teaching emphasizes the importance of qualities such as commitment and dedication, cooperation, self-control, trustworthiness, tolerance, compassion, work ethic and responsibility, respect for others and self, fairness and justice, and respect for the community and the environment. The incorporation of prosocial practices in schools through character education programs have been cited as causal factors in reducing triggers for conflict, teaching effective interpersonal skills, and avoiding the escalation of conflict into violence. Unfortunately, this widely implemented approach has yet to be subject to the scrutiny of empirical investigation.

Safe schools foster close, caring relationships between students and staff and help adults to identify students needing intervention. Moreover, having close relationships help foster a sense of community among students. Additionally, since research has demonstrated that a supportive relationship with an adult is a primary factor in preventing youth violence, closer relationships between staff and students may, in turn, further reduce the risk of violence within the wider school community.

In a similar vein, research has shown that peers are often alert to the likelihood of dangerous activity within their school. Students are more likely to report dangerous situations to a supportive school staff. Safe schools encourage the participation of families and community members. In such schools, parents and members of community-based organizations feel welcomed and are encouraged to participate in school activities. In this way, students' sense of community is extended beyond the school walls. Students who feel that they are valued by family and community are less likely to be involved in undesirable behavior and more likely to experience academic success.

Schools, families, agencies, and religious groups can work to maintain appropriate examples and offer support, give gentle reminders about desired behaviors, and provide positive affirmations. Positive character traits are not only for display within schools by children, but employers, community agencies and other stakeholders can also model them.

Safe schools encourage each student's active involvement in maintaining their school as a safe community. Creating a positive school climate requires an acknowledgement that children and youth are themselves experts in their own developmental pathway and needs. Safe schools involve students in the creation of school-wide codes of conduct, on safety committees, and as peer mediators to help resolve student disputes nonviolently. The benefits of active student involvement are twofold. First, utilizing student input helps foster a sense that adults respect students' efforts at self-regulation, a critical initial step in developing self-control. Second, working with students to develop safety strategies that will be effective *and accepted* among their peers demands that the students' perspective on the value of each of these activities be considered.

The creation of a positive school climate helps students feel a sense of personal value within their school community. When students feel valued, they are less likely to engage in destructive behaviors and more likely to feel a responsibility to report the dangerous behavior of others to a trusted adult.

BEST PRACTICES IN PROMOTING SAFE SCHOOLS

Steps in Developing a Safe School

Few recent educational phenomena have seen the scope of national attention received at the issuance of *Early Warning, Timely Response* and *Implementing Early Warning Timely Response* (Dwyer, Osher, & Warger, 1998). The focus of these practitioner guides is on providing a practical plan for promoting safe school environments and identifying high-risk students and conditions. A safe school plan comprises a continuing, broad-based, comprehensive, and systematic process to create and maintain a safe, secure, and welcoming school climate, one free of drugs, violence, and fear (Stephens, 1994). The development of a school-wide plan encourages a prevention approach rather than a reactive one. Indeed, violence is often a rather predictable event (Kingery, McCoy-Simandle, & Clayton, 1997). In many cases, the children in the school are aware of its impending likelihood, thus making violence avoidable with appropriate intervention strategies.

Appropriate responses to school violence include student, family, and community initiatives (Baker, 1998; Miller, 1994). The involvement of the community in this process is critical, for school violence is often closely linked to violence in the community at-large (Kingery et al., 1998). Students who demonstrate violent behavior in school are frequently the same students who exhibit behavior problems in their community. A complex array of strategies is necessary to successfully intervene with the problem of school violence (Baker, 1998), including a vision of optimal functioning and an action plan to implement the vision.

Baker (1998) argued that school violence represents a failure of community in schools. In schools that adopt a mission emphasizing community orientation, students feel a sense of belonging, commitment, and shared enterprise of academic achievement. Violence at school may represent a breakdown of this sense of identity, belonging, and community. Baker (1998) has maintained that violence-prone students experience fundamentally different orientations toward, and skills for negotiating, social experiences. The manifestation of violence in such students is the result of a mismatch between (a) the students' developmental capacities and (b) the social context and demand characteristics of the school.

Indeed, it has persuasively been argued that weapons on campuses are not themselves the problem, but rather a symptom of a fundamental interpersonal and structural weakness in the school community (Morrison et al., 1994). When students perceive that school officials are fair and caring, they feel a greater stake in making their own school safe (Hyman & Perone, 1998b). It should be the goal of schools to enact policies and procedures that foster nonviolent attitudes and environments of caring, respect, and acceptance of diversity (Miller, 1994).

Schools may unwittingly contribute to violence when they fail to provide students with meaningful social contexts in which to function. Baker (1998) illustrated that classroom management practices that focus on character development rather than behavior management are more likely to promote affiliation to the school. Baker cited research (Sergiovanni, 1994) supporting the emphasis of personal and civic responsibility, development of skilled and moral decision making, and emphasizing the importance of mutuality and commitment within the community as likely to benefit a sense of belonging. Baker added that this involves an intentional focus on developing personal responsibility, social competencies, and empathy for others, as well as shaping the peer culture toward prosocial interaction.

Historically, when dealing with discipline problems schools have used procedures such as suspension and expulsion reactively, rather than relying on proactive classroom procedures (Larson, 1998). The effectiveness of such punitive procedures has long been questioned in terms of their ability to reduce behavior problems (Larson, 1994). In fact, there are no systematically gathered data that support using suspension for this purpose. Likewise, sanctions such as suspension and expulsion may have the unintended effect of putting even greater distance between disaffected students and their school community (Baker, 1998).

Excessive use of punishers may lead to increases in the very acting-out behaviors they are intended to reduce (Horner, Sugai, & Horner, 2000; Hyman & Perone, 1998b). Unfortunately, a vicious circle is created whereby further acts of violence result in calls for more punishment that simply exacerbate the problem rather than preventing future misbehavior. Such procedures have tended to be used merely as political cover for addressing complaints or to mask disproportionate disciplinary patterns.

Creating a Safe Physical Environment

While maintaining a positive school climate is a crucial element in creating a safe school, safe schools realize that creating a secure physical environment is a prerequisite for students and staff to feel protected. A positive climate promotes and extends a feeling of safety within the school's buildings and in the surrounding school grounds and boundaries, and physical security helps ensure that safety. Physically safe schools with secure boundaries and adequate internal security foster academic achievement and help prevent school violence.

The physical condition of the school plays an important part in establishing children's attitudes toward appropriate behavior and academic achievement. Children who attend clean schools that are in good repair and free of graffiti are significantly less likely to exhibit acting-out behaviors than will their counterparts in derelict surroundings with marginal security.

Safe schools maintain an active relationship with their local police department and may enlist the presence of a uniformed school security officer. Having uniformed law enforcement personnel interact with students may not only deter crime within the school but may also play an important socializing and educative role for students. Since schools are integral elements of the community then Community Policing Initiatives and school-based "resource" police officers have a role to play alongside professional educational staff.

Furthermore, safe schools ensure the physical security of the school campus by

1. Conducting safety analyses of school grounds and buildings in conjunction with local law enforcement and knowledgeable school security personnel.
2. Limiting unsupervised access to the building and grounds and closing the campus when teaching is not being conducted.
3. Arranging supervision before and after school and at other typically unsupervised times (e.g., lunch periods, bus transfers) with adults, including parents and community volunteers, visibly present in the building and on school grounds and in isolated areas.
4. Modifying bell schedules and staggering dismissal and lunch times in order to limit student congregation in unsupervised areas.
5. Sensitively implemented use of enhanced security measures (which at the unwelcome extreme has involved restricted use of book bags, implementation of metal detectors, and regular locker searches and sweeps).

Unfortunately, maintaining the security of the school building and its immediate surroundings is often itself insufficient, and research has repeatedly shown that the primary reason students bring weapons into school is for their personal protection on their *way to and from* school. Violence within our schools is largely a reflection of violence within the greater community. Therefore, schools must develop safety strategies that travel beyond the school's borders. These include enlisting community and family support by encouraging the organization of neighborhood watch programs, establishing volunteer community and parent patrols of the campus and its perimeters before, during, and after school and at school events, and establishing an appropriate referral system for children who are suspected of being abused or neglected.

Creating a School-Wide Team/Task Force

Safe schools develop teams in order to effectively and efficiently plan, execute, and monitor school safety programs and initiatives. Safe schools organize both a violence prevention task force to focus on school-wide safety issues, and an intervention team to focus on individuals with enhanced need for services. A demonstration program reviewed by the National Institute of Justice (Kenney & Watson, 1999) and incorporated into Charlotte-Mecklenberg Schools, North Carolina, provides a comprehensive model for the implementation of such a system-wide approach.

A school's violence prevention task force is made up of individuals from varying (but complementary) backgrounds including the school principal, teacher, guidance counselor, and school psychologist (serving as the school's mental health professional with expertise in prevention and intervention). This core team works with students, non-teaching school staff, parents, and representatives of community organizations (including law enforcement) who serve as its members. This committee develops, implements, and monitors the school's efforts in safety initiatives including (a) the initial school safety analysis, (b) prevention and intervention services, (c) school reform, (d) drafting conduct codes and appropriate consequences, (e) crisis response planning, (f) the facilitation of family and community involvement, and (g) the implementation of prosocial themes within classrooms.

In addition, safe schools establish an intervention team that includes the same core members as the violence prevention task force (the principal, a teacher, and school psychologist) in order to facilitate the sharing of information between the two groups. Additionally, the intervention team collaborates with community agencies to expedite the use of outside services where needed. The intervention team's purpose is to provide direct, individual services to students who may need help. Specifically, the function of the intervention team is to (a) provide diagnostic and evaluation services; (b) conduct functional behavior analyses in order to develop individualized interventions; (c) consult and collaborate with staff, students, and families on issues of safety; (d) ensure that *all* school staff are familiar with early warning signs and ensure prompt service to students demonstrating worrying characteristics; (e) ensure that all students, staff, and families understand the role of the intervention team; (f) adopt policies and procedures regarding the provision of services for referred students; and (g) take immediate action with referrals. The intervention team should be readily accessible to students, staff, and families in order to facilitate timely response to potential dangers.

Teams should openly and objectively examine potentially dangerous situations within the school, and school security should regularly be examined and findings should be shared with the community at large. Additionally, both teams should involve parents-as-experts regarding their children's home life and life history. Moreover, school teams should develop their initiatives with developmental and cultural appropriateness in mind.

Early and Imminent Warning Signs

In most cases school violence does not *just happen*. In retrospect people often can point to troubling signs that preceded the violent event. Unfortunately, the early indicators of violence are often misread or are ignored outright. Safe schools ensure that *all* school staff (including bus drivers, cafeteria, custodial, secretarial, and other non-teaching staff) *and* the greater community are alert to the importance of detection of early and imminent warning signs of violent behavior. Moreover, safe schools make certain that students, staff, and families know the importance of promptly reporting these behaviors to the intervention team and have developed simple procedures for doing so.

RISK-FACTORS/WARNING SIGNS

There are several *early warning* signs that may signal a troubled child (Dwyer et al. 1998). In addition, there are *imminent warning* signs that indicate a student is very close to behaving in a way that is potentially dangerous to self or others. These imminent warning signs require immediate action from school personnel. This is particularly true when the student (a) has presented a detailed plan (time, place, method) to harm or kill self or others, particularly if the child has a history of aggression or has attempted to carry out threats in the past; or (b) is carrying a weapon, particularly a firearm and has threatened to use it. In these cases, parents should be informed immediately and appropriate community agencies should be enlisted for assistance.

There has been an increase in the development of programs and procedures that assist systematically in identifying violence-prone students *before* crises erupt. Such procedures, commonly referred to as "student profiling" (Fey, Nelson, & Roberts, 2000; Lafee, 2000; Nelson, Roberts, Smith, & Irwin, 2000), have generated considerable controversy. Kingery et al. (1997) argue that singling out potentially violent students is misguided. Instead, they advocate enhanced services to the most vulnerable students to improve their coping resources and school and personal success.

Early warning signs include, but are not limited to, the following:

1. Social withdrawal
2. Poor peer relations, feelings of isolation and/or rejection
3. History of victimization, gang involvement, or intolerance of differences
4. Poor academic performance and school attendance
5. Verbal, drawn, or written expressions of violence or intimidation
6. Uncontrolled or unwarranted anger
7. Serious threats of violence or a history of violent, aggressive, bullying, or disruptive behavior toward peers and others
8. History of discipline problems
9. Access to firearms
10. Drug and alcohol use

In some instances, behaviors are severe enough to warrant immediate response. These behaviors are imminent warning signs signifying that a person is at *very high risk* for causing harm to self or others. Such imminent warning signs include

1. Use or possession of weapons
2. Detailed threats of violence (especially threats mentioning murder or suicide)
3. Serious destruction of property
4. Self-injurious behaviors

5. Intense rage over apparently trivial matters

6. Engaging in serious physical fights with peers or family members

PRINCIPLES TO GUIDE PRACTICE

Dwyer et al. (1998) advises that, when responding to these warning signs, school officials do no harm, understand violence and aggression within a context, avoid stereotypes, view warning signs within a developmental context, and understand that children typically exhibit multiple warning signs. While the existence of one or more of these warning signs may predict future or imminent violent behavior, it is crucial to remember that these predictors do not, in themselves, unequivocally signify that an individual will become violent. The principles to follow when faced with a child who manifests one or more of these behaviors include

1. Do no harm: The sole aim of any intervention with a fragile or troubled child should be to get the child help in a timely fashion.

2. Understand the antecedents that contribute to violent and aggressive acts: Violence and aggression are triggered differently in each child. It is important to understand the factors within the school, home, and other contexts that exacerbate violence and aggression in the individual at hand.

3. Consider warning signs within a developmental context: In order to avoid misconstruing a child's developmentally appropriate behavior for something deviant, it is important to understand what behaviors are considered normal for the child's developmental level.

4. Avoid stereotyping: Physical appearance, race, socioeconomic status, cognitive ability, academic achievement, and similar features are *not* indicators of the potential for violence and, if acted upon, may cause serious harm to the child. Such profiling is patently destructive to the creation of a sense of community and trust, essential foundational features for a safe-school climate. The FBI, the governmental agency with the longest history of studying school and community-based violence, counsels careful avoidance of profiling (O'Toole, 2000). Recognize that at-risk children tend to exhibit *multiple* warning signs: It is important to not overreact to single unrelated incidents. Typically, children who are at-risk for violence and aggression exhibit multiple warning signs, repeatedly and with heightening severity over time.

Early Intervention

Safe schools make early intervention services available to students at risk of academic failure or behavior problems. The most successful interventions begin as early as possible in order to help the child establish effective, socially acceptable ways with which to handle interpersonal conflict.

In order to be maximally effective, early interventions begin with a functional assessment of the child in various contexts to identify the settings and circumstances that are most and least likely to exacerbate the problem behavior. The team analyzes the reasons for the behavior and then addresses the strengths, weaknesses, and interests of the child prior to selecting an appropriate individualized intervention.

Successful interventions use team approaches that acknowledge the child and the child's family as coequals with team partners. The team chooses an intervention that is appropriate for each child's linguistic capability, developmental level, and culture. In addition, the intervention should utilize a theory-based approach with established efficacy that treats the target-behavior as but one component of a class of antisocial behaviors with each element of the intervention reinforcing another.

Prevention

Unfortunately, not every child is able to get his or her needs met through early intervention. In cases where students are not consistently or persistently violent or seriously violence prone, a primary prevention program that is developmentally appropriate and individualized to the child's strengths and weaknesses, and that promotes the learning and/or use of social and cognitive skills, is in order.

For children who are persistently violent, secondary prevention initiatives become necessary. Such prevention programs typically attempt to educate about the antecedents to aggression, and incorporate sustained multimodal treatments to focus on the individual child's affective, cognitive, and behavioral skills. Furthermore, effective secondary prevention programs continue their involvement of the family as they attempt to modify family members' relationship patterns wherever they are counterproductive to safe and respectful interaction.

Safe schools begin with a positive foundation and utilize intervention and prevention programs to promote prosocial behaviors among at-risk children. Moreover, schools that are supported by the district's administration in their efforts to promote safety become effective schools. Safe schools develop system-wide policies that promote the identification of early warning signs and support early intervention and prevention programs for at-risk students.

REVIEW OF PREVENTION PROGRAMS

Larson noted in 1994 that procedures and curricula for violence prevention in the schools were in their infancy. Unfortunately, there are relatively few data available that systematically evaluate the impact of popular violence prevention programs, and there is a clear need for innovation in empirically establishing which programs are effective (Larson, 1998). While it is commonly believed that something must be done, only recently have there been serious efforts to adequately evaluate violence prevention efforts. Clear advances have recently been made in gathering blueprints for the promotion of safe schools, most notably the work of the Center for the Study of Prevention of Violence (http://www.colorado.edu/cspv/) that has evaluated model programs and based on rigorous selection criteria determined some as "promising." This valuable resource even provides an online interactive system for matching a safe-schools program model with a school's local characteristics. Additionally, the National Training and Technical Assistance Center's Safe Schools Healthy Students Action Center (http://www.nttac.org/catalog/projects/nmhaP1.cfm) provides technical assistance to school-based violence prevention activities. This center is operated jointly by the National Mental Health Association and NASP and provides a regularly updated online portal for accessing details of innovative, proven approaches to the promotion of safe schools.

Prevention programs are as varied as the problems that they are designed to address. In general, programs have been chiefly concerned with teaching students responsible behavior (Benson & Benson, 1993). Indeed, it has been argued "the distinction between social skills training and violence prevention is blurred at best" (Larson, 1994, p. 151). Unfortunately, educators too often "have failed to recognize that the teaching of self-discipline, not the external control of behavior, is the ultimate goal of social education" (Bear, 1995, p. 431). Rather than policing students and campuses, school psychologists should be involved in tapping into existing skills and resilience of the student body (Morrison et al., 1994).

There is a need to begin teaching responsible citizenship, effective decision making, conflict resolution skills, cooperation, and simple courtesy early in a student's schooling. While including the use of disciplinary actions to address problem behavior, efforts at school management should also include instruction designed to teach *self-discipline* (Bear, 1995). Such interventions should be implemented system-wide as well as targeted to selected at-risk students.

Because school violence incidents are most prevalent at the middle school level, best practice dictates that violence prevention efforts should begin in the earlier grades. Efforts should be research-based, as well as developmentally and culturally sensitive, in order to address the needs of students *before* they reach the secondary level (Larson, 1998).

Practically useful reviews of school violence prevention programs include Bear (1990, 1995, 1998), Kay and Ryan (2000a, 2000b), Knoff (2000), Larson (1994), McMullen (1996), McMullen, Laurer, McMullen, Troxell, and Goettel (2000), and Shapiro (1999). In addition, best practice guidelines for developing general prevention programs were described by Hightower, Johnson, and Haffey (1990). Reid and Patterson (1991) provide a model social interactional model for the early prevention and intervention of students' conduct problems.

School-Wide Policies That Promote Safety

Within safe schools, there are codes of conduct that reflect the prosocial behaviors that are, in turn, modeled by all school staff. Safe schools include representative members of the staff, student body, and family stakeholders in drafting and implementing rules and regulations that are both culturally sensitive and reflective of the school's academic goals. These codes are not punitively focused on identifying the *don'ts* with elaborations on punishments for infractions; rather they act as the school's standards for living. They teach and emulate appropriate behavior rather than elaborate on the enforcement of punishers for those who defy the code.

In general, effective codes of conduct stress few rules. The codes are, nonetheless, clearly defined, face valid, and relatively uncomplicated. Further, safe schools ensure that their rules are enforceable, realistic, and consistently executed. In addition, safe schools broadcast loudly, and often their *zero tolerance* policy toward the illegal possession of weapons, illegal drugs, and alcohol. The enforcement of zero tolerance reduces future problem behavior among chronic offenders (Uchitelle, Bartz, & Hillman, 1989).

In order to be effective, the consequences for violating the school's standards for living must be defined equally simply, clearly, and without unnecessary elaboration. These consequences should use positive methods of discipline that are proportional in severity to the offense, and that adhere to the conflict resolution skills that are reinforced in every classroom. Finally, if an offense is met with a negative or punishing consequence (e.g., suspension), safe schools assess any antecedent factors that may have exacerbated the behavior so as to incorporate appropriate training in prosocial behaviors congruent with the offense.

What follows are procedures for developing a safe school (after Stephens, 1994):

1. Create a climate of ownership and school pride.
2. Establish a Parent's Center; get parents on your side by establishing collaborative partnerships.
3. Increase safety via school physical design.
4. Make the campus welcoming and safe to students.
5. Establish campus intruder and visitor screening procedures; limit access to school grounds.
6. Establish a vibrant system of extracurricular programs; make certain there is an active student component.
7. Provide adequate adult supervision.
8. Establish inservice training.
9. Implement staff screening process.
10. Establish clear and reasonable dress codes and behavior guidelines.
11. Mandate crime reporting and tracking and establish a closer law enforcement partnership.
12. Establish a crisis response plan.
13. Provide adequate support and protection for victims.
14. Target troublemakers; closely supervise known juvenile offenders.

Another factor becoming especially important is the role of students in reporting to appropriate school personnel their peers' warning signs, and threats from other students (Skiba & Dwyer, 1999). Two factors that often impede the reporting of this information are students' difficulty in determining what constitutes a truly serious threat and their belief that reporting may increase risk to their own safety. The *Early Warning, Timely Response* (Dwyer et al., 1998) guide contains several "Action Steps" for students that encourage them to take ownership of their school's safety, including informing school staff of their observations and concerns. This concept is extended further in the *Implementing Early Warning, Timely Response* practice guide (Dwyer & Osher, 2000) to include a Student Support Team charged with responding to referrals of concerns about individual students.

What follows are characteristics of a school that is safe and responsive to all children (Dwyer et al., 1998):

1. Focus on academic achievement
2. Involve families in meaningful ways
3. Develop links to the community
4. Emphasize positive relationships among students and staff
5. Treat students with equal respect

6. Create ways for students to share their concerns
7. Help children feel safe expressing their feelings
8. Have in place a system for referring children who are suspected of being abused or neglected, or otherwise at-risk
9. Offer extended day programs for children
10. Promote good citizenship and character
11. Identify problems and assess progress toward solutions
12. Support students in making the transition to adult life and the workplace
13. Discuss safety issues openly

Dwyer & Osher, 2000 recommends a three-level implementation approach to preventing violence. The first step involves building a school-wide foundation for all children that incorporates supporting positive discipline, academic success, and mental and emotional wellness. This could be accomplished by developing a caring school environment, teaching appropriate behaviors and problem-solving skills, providing positive behavioral support, and appropriate academic instruction. The second step involves intervening early for selected children. Included in this step would be the creation of services and supports that address risk factors and build protective supports for students at risk for severe academic and/or behavioral difficulties. The third step involves providing intensive interventions for a few children. This entails providing coordinated, comprehensive, intensive, sustained, culturally appropriate, and child- and family-focused services and supports.

Effective Crisis Response Plans

Safe schools take every precaution to prevent violence from occurring within the school. Safe schools do not wait for a disaster. Rather, safe schools anticipate it as a possibility, however remote. In an actual crisis, safe schools are prepared because they have already created prevention and response plans.

Effective crisis prevention and response plans include three levels of organization: (a) policies and practices that are designed to prevent a crisis from occurring, (b) initial response arrangements that deal with response in the immediate aftermath of a crisis in order to minimize the effects of the crisis, and (c) long-term response contingencies that deal with the enduring effects of a crisis.

Whenever planning immediate response strategies, safe schools make the protection of students and staff their primary objective. The most effective crisis prevention and response plans are flexible enough to be quickly modified in order to contend with specific crises. Safe schools develop error-proof ways to contact outside agencies (e.g., direct telephone access to law enforcement with an agreed code to signal emergency status), designate specific roles for key staff members in an emergency, maintain an effective means for *within-building* communication, and develop evacuation contingencies with order and safety as paramount concerns. Additionally, safe schools routinely monitor their immediate response plans by conducting periodic emergency drills to test their system. Finally, safe schools develop procedures to communicate with parents and reunite families and have established and agreed procedures for communicating with the news media and others *outside* the school.

In the aftermath of a crisis—whether natural (weather-related) or human caused (e.g., personal violence) —safe schools continue to support the psychological healing of the entire school community. Effective follow-up plans address the feelings and safety concerns of students as well as faculty and staff and help all their family to readjust following the crisis. The best tertiary prevention plans identify highest-risk participants and provide them with additional counseling, involve outside agencies (e.g., community counseling services) and crisis response teams (such as NASP's National Emergency Assistance Team, NEAT), and educate staff and families about children's typical response patterns to trauma.

Need for Further Training

It is clear that more training in violence prevention for school psychologists is warranted (Cornell & Sheras, 1998). Few school psychology preparation programs place appropriate emphasis on this topic, and school psychologists generally lack sufficient practicum-based training to deal with school violence (Larson & Busse, 1998; Morrison et al., 1994). Most training programs, for example, do not teach skills necessary to assess the degree of danger in students in order to predict the likelihood of violent behavior (Hansen, 2000). Another example of this lack of preparation is evidenced by survey results asserting that 85% of the school psychologists contend they had *no* specific training in school violence, while 73% felt *unprepared* in dealing with school violence (Furlong, Babinski, Poland, Munoz, & Boles, 1996). Furthermore, school psychologists often lack basic knowledge of the myriad of legal issues surrounding the policies and procedures that may be enacted to promote safe schools.

Morrison et al. (1994) have described school safety as an "educational right," one that schools have a legal and moral responsibility to protect. Larson (1994) has argued that continued delay in providing services to children at-risk for, or engaging in, violent behavior is ethically irresponsible. Thomas (1998) stated, "we now have a golden opportunity to expand the scope of our efforts to include prevention activities that directly relate to mental health issues that affect children and youth" (p. 2).

Furlong, Morrison, and Pavelski (2000) asserted that contemporary concerns about school violence provide school psychology a rare opportunity to reinvent itself for the twenty-first century. They maintain "School psychology potentially is facing another watershed social force that has the potential to change fundamentally the ways that school psychologists spend their work days and the types of research they conduct" (p. 82). These authors assert that much is required to increase school psychologists' attention on school violence to become an equal partner with counselors—who have dominated the school violence literature over the last decade.

SUMMARY

Safe schools include students, families, and the greater community in planning and implementing safety initiatives. Safe schools create climates of cooperation and respect in which academic achievement and behavioral responsibility are the focus and a commitment of all stakeholders.

School administrators with the direct involvement of school psychologists can facilitate improved school safety by combining a positive school climate with a secure physical setting and fine-tuning proactive plans for both prevention and intervention. Further, stakeholders who are educated by school psychologists about the early and imminent warning signs for violent behavior are more likely to report them. Likewise, safe schools incorporate access to *both* internal and external supports for referred and high-risk children.

Because violence in our nation's schools is a reflection of violence within the broader society, safe school strategies will not put an end to the incidence or the effects of violence in our schools. Nonetheless, with these strategies school psychologists can help establish schools as appropriately prepared safe havens in the event of a disruption to the school's otherwise safe educational experience.

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Based on *Early Warning Timely Response: A Guide to Safe Schools*, it presents a plan for implementing safe schools practices, suggesting a three-tiered approach to preventing school violence that includes building a school-wide foundation, early intervention, and intensive interventions. Attention is paid to building an overall positive climate within the school, establishing school-wide teams, responding to the early warning signs of violence, and providing intensive interventions. It emphasizes that safety programs should focus on problem solving, not labeling, and encouraging responsibility and respect for others.

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This digest suggests social skills models as promising approaches to addressing problem behavior within the school community, one that simultaneously involves three areas: analysis of overall school atmosphere, addressing specific areas of concern within the school, and promoting discipline and responsibility. The author calls for educative rather than punitive responses to troubling acts, and specific strategies for implementing this system are provided. This web document also contains articles on discipline and management of disruptive behavior, defusing crises, bullying, and disciplining students with disabilities.

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Best Practices in Making School Groups Work

Fred Jay Krieg
Marshall University Graduate College
Christine Simpson
Nazareth, PA
Richard E. Stanley
Veterans Administration
David A. Snider
Frontier Local School District
Wirt County Schools

OVERVIEW

The therapeutic application of group counseling has a history that extends over the past 100 years. During this time, the general efficacy of group counseling has been established in empirical literature (Barlow, Burlingame, & Fuhriman, 2000) and also as an intervention strategy for children and adolescents (Hoag & Burlingame, 1997). Interventions include prevention, education, and counseling.

The study of school groups began with the work of Slavson (1940) and has become increasingly popular as school psychologists become more involved with the delivery of mental health services in schools. "The empirical literature supports the power of school groups as a viable intervention for children with emotional, social, and learning dysfunctions ... which can reduce the suffering of children, and prevent impairment in adulthood" (Shectman, Gilat, Fos, & Flasher, 1996, p. 367).

School groups are a cost-effective method to enhance social skills and deliver primary prevention services. Schools have a large captive audience and represent a common place for students to share, talk, and learn. Given the expanded role of school psychologists in drug and alcohol prevention, drop-out prevention, and other at-risk behaviors, it is essential that school psychologists possess the necessary knowledge and skills to lead school groups.

Group counseling offers the opportunity for positive peer experiences as groups provide a method for students to learn universality through feedback from peers under the supervision of a trained professional. School groups provide an opportunity for students to enhance self-esteem and increase their communication skills. For those with greater needs, a school group provides a forum to discuss problems and personal issues that cannot be appropriately aired in the classroom. Used appropriately, school groups serve as a vehicle to identify students who are in need of more intensive services due to difficulties at school, at home, or in the community.

There are a variety of models of group counseling. School groups vary in length from six-session problem-oriented groups—such as divorce groups, children of alcoholic groups, and transition groups—to a 30-session more therapeutic group model. This chapter focuses on skills necessary for effective group leadership in schools and examines how these skills can be utilized so that groups can function as both a prevention and intervention program within the school setting. The authors have used a particular model for over 15 years, and the Adolescent Group Counseling in Schools Program has been recognized by the National Association of School Psychologists as an exemplary mental health program (Nastasi, Varjas, & Bernstein,1998). Also presented is an 8-week model that has been used by the authors in Project YIELD (Youth in Effective Legal Diversion), nationally recognized by the Office of Juvenile Justice and Delinquency Prevention as a model program in 1996. Both of these models use essentially the same leadership style and techniques to enhance social skills, and have resulted in significant behavioral changes in children and adolescents.

Mechanisms of Change in Group Counseling

Whereas in past generations the predominant issues for adolescents were the independent-dependent battle, repressed sexuality, and aggression, today's adolescents experience a lack of hope, fears of abandonment, and rejection, and often lack a sense of intimacy, involvement, and trust (Offer, Ostrov, & Howard, 1981). Group counseling addresses these major life circumstances for students and provides an opportunity for social skill enhancement. There are four major mechanisms that facilitate change through the group process.

1. *Cohesiveness.* By promoting member-to-member interaction and empowering the group members to solve their own issues and problems, the group leader promotes membership, acceptance, and approval as the group builds the cohesiveness essential for the group to be successful (Porter, 1994; Lonergan, 1994). Cohesiveness is the attraction that members have for each other. When a group is cohesive, the members are accepting of one another, supportive, and inclined to form meaningful relationships.

2. *Universality.* The second major mechanism for change is universality, whereby the adolescents learn, perhaps for the first time, that they are not alone in their particular feelings or circumstances. Sharing, ventilation, and insight serve to increase social skills and to clarify adolescent issues while simultaneously instilling a sense of hope and positive expectations for the future. This bond of universality helps lessen feelings of alienation and isolation and also fosters a sense of belonging. Further advantages of group counseling focus on students receiving honest, undeniable feedback from group members (i.e., peers who know each other's "true form" outside of the group). Learning the effect and impact of their behavior from other students assumes greater potency than receiving the identical message from an adult, which in and of itself underscores the strength of group counseling.

3. *Insight times action equals change (I x A = C).* The third mechanism of change is best explained by the mathematical concept "insight times action equals change" (I x A = C). Insight is defined by Phares and Trull (1997) as "...total understanding of the unconscious determinants of one's irrational feelings, thoughts, or behaviors that produce personal misery" (p. 333). Yalom (1995) states that "Insight defies precise description," but goes on to say that "insight occurs when one discovers something important about oneself, about one's behavior, one's motivational system, or one's unconscious" (p. 45). (For a more detail definition of insight, see Yalom, 1995, pp. 45–46.) Students gain insight from the focus on interpersonal dynamics rather than psychodynamic issues. By allowing members to talk through their present problems rather than their personal history, insight is attained. Action is provided by permitting the members to practice new behaviors such as empathy, face-to-face feedback, intimacy, and involvement within the group setting. The group itself becomes the agent of change. Leaders do not play "brilliant analyst" but rather encourage maximum self-direction. Members do not have to tell each other about their problems. The group experience allows each member to observe the issues first-hand. The feedback that members give each other maximizes the energy and the power of the group experience. Leaders discourage advice-giving and questioning by focusing on members' interactions, thoughts, and feelings.

4. *The inside/outside mechanism.* The fourth and perhaps the most meaningful mechanism of change is referred to as "inside/outside." The group leader facilitates the members by using the new perceptions and skills learned in the group to improve the behavior that precipitated their placement in the group in the first place. "Group is a microcosm of the macrocosm" (Yalom, 1995, p. 37). Utilizing their new-found skills outside of the group enhances the overall effectiveness of the group experience when members report to the group their attempts to apply these new skills in the "real" world.

Group is a series of complex processes, not a single curative experience. In order for these mechanisms of change to maximize their effect, the group itself must become the agent of change. The longer the group meets, the greater the likelihood these changes will come to fruition. Group is a process, not an event.

Problems in Group Leadership

Given the information presented in this chapter, and information gathered from experience, and the more one has the opportunity to be a group leader, it is very clear that all group problems fall on a continuum. The more one knows about group, the more one knows about the problems that occur. A group leader has two options, and each of these two options has two bipolar alternatives for consideration. The first thing a leader can do is to let a problem take its natural course; that is, just let a problem happen. If the leader chooses this first option, then the group will have a great deal of anger, frustration, and anxiety, which will provide a source of energy within the group. If the group is able to survive this process, then once it solves its own problem(s) the group will become cohesive more quickly. Hence, cohesiveness is obtained easier and quicker if the group leader allows a problem to happen. On the other end of the continuum is the approach that the leader, knowing the problem, decides to prevent the problem from occurring within the group—an option referred to as "the heading-the problem-off-at-the-pass" approach to group leadership. When a group leader does the latter, he or she identifies the problem to the group before it actually happens; the group then realizes the problem as it is going through it and the group leader is a more active participant in solving the problem. When the latter approach is used, the group will become cohesive; however, because it lacks the energy and frustration derived from the experience of solving its own problem, the group will take longer to build cohesiveness.

The group leader is always faced with the option of allowing a problem to occur or "heading-the-problem-off-at-the-pass." This decision is based on the leader's knowledge of group process and experience as the group leader. The decision-making process faced by a leader is also dependent on the nature of the group itself; that is, whether it be the type of group members (group composition) or the physical location of the group. If a group problem occurs in a situation in which the members have no choice but to attend and cannot leave, then the let-it-happen approach is more appropriate and safe. However, in a situation wherein attendance may be a difficulty or wherein there may be a problem getting members to return to a group, then leadership style must be much more conservative and must not allow problems to be totally solved by the group experience.

The information contained in this chapter gives some of the variables that a leader must think about as he or she functions in the role of primary group leader. Where the group is in its developmental stage, the makeup of the group, the location of the group setting, and how much control over attendance and participation the leader has all affect the leadership style that the leader brings to the group experience. Although a school may appear to be a situation in which a leader has total control of the attendance of the group members, quite the contrary is the case. The fact of the matter is that school groups must be handled by using a very safe structure because you want the students to benefit from the experience, and if there is too much energy early on in the group, then the group will not survive the conflict of the early process.

THE FOUR TASKS OF GROUP LEADERSHIP

All too often, group leaders perceive their roles as providing insight into problem behavior. While facilitating group members' experiencing insight is a very important and meaningful task of group leadership, initially this task takes a back seat to constructuring/ structuring the group. In fact, constructing and structuring the group is perhaps the most vital and primary function of the leader. Lack of structure and ambiguous expectations are the most frequently cited reasons for the failure of a group. Unless careful attention is paid to constructing the group and to ensuring that group is a safe place to share, the group will never achieve maximum therapeutic value.

Task One: Constructing the Group

The primary task of group leadership is constructing the group, which requires that several factors be addressed prior to conducting the initial session. Those factors include group composition, physical setting, record keeping, and an initial one-on-one interview with each of the potential group members.

GROUP LEADERSHIP

Consideration of group composition is critical in regard to leaders and members. Much has been written about whether solo leadership or co-leadership is more advantageous (Yalom, 1995; Wheelan, 1997). Although there are many ways a co-leadership model can be implemented, and despite the fact that co-facilitation between equals would be the "politically correct" model, experience has shown that it is better to define one leader as the primary or dominant leader. There are, indeed, various reasons for this. After 15 years of experience, the authors have found that the use of co-leaders, presumed to be equal, results in a power struggle between the two of them to determine who will be the primary leader and who will be the secondary leader. Based on this experience, the authors suggest a model in which there are primary and secondary leaders who are designated these roles at the outset. Based upon the authors' experience, the primary/secondary leader model has been found to provide much greater facilitative value.

The dynamics between the primary and the secondary leader are key and often complex. Since group recapitulates primary family dynamics, the primary/secondary leadership structure resembles the roles parents play and recreates relationship dynamics that all members bring with them to group. In addition, the primary/secondary leadership model avoids rivalry for leadership of the group, which eliminates the competition that occurs in co-leadership models where theoretically equal leaders vie for supremacy until one achieves a primary leadership role and the other a secondary position. Those roles are separate and distinct. Within the group setting, primary and secondary leaders sit directly opposite each other. If the primary leader is absent, then the secondary leader sits in the chair of the primary leader and conducts the group, performing the function of the primary leader. It is important never to have anyone fill-in for an absent leader; therefore, the secondary leader's seat remains vacant when only one leader is present. In addition, the two-person leadership model has a built-in benefit in that the two leaders can lend each other support and double the quality and quantity of observations about the ongoing process and progress of group. Beyond this, during times of intensity and stress, it can prove to be invaluable to have a partner who can step back, analyze, and possibly redirect the action.

The primary leader has overall responsibility for the group, and should be more verbal and active than the secondary leader, and assumes the overall responsibility for the functioning of the group. The less verbal secondary leader is the support person who monitors the process of group. The job of the secondary leader is to broaden the area of interaction, frequently breaking a one-to-one interaction between the primary leader and a student. As the group progresses, the secondary leader becomes more verbal. Secondary leaders are available if there is a crisis situation. For example, if a student leaves the group room, the secondary leader can follow that student so that he or she is not roaming the school without supervision. It is suggested that the school psychologist be the primary leader and that the secondary leader be found among other faculty members within the school.

Choosing a co-leader is much like choosing a spouse: The primary leader must find someone who is not only compatible but who also blends his or her strengths and weaknesses with the strengths and weaknesses of the primary leader. Experience has taught us that the gender of the leaders is inconsequential. Group members will assign "roles" to the leaders consistent with their own family dynamics. What is important is to avoid splitting and not to allow students to play one leader off the other as students often do with their parents.

Members come to the group with their own personal issues to deal with. What a member brings to and takes from group may or may not reflect what is actually discussed within the group, as different students receive different experiences from the group based on their own dynamics and issues. Frequently, the leaders will represent mother and father figures and the other group members siblings and/or peers.

GROUP MAKEUP

If the heterogeneous construction of group is followed, and/or if the group is going to be used as a prevention model, then the mix of the group is the key to its success. A careful balance or blend of group members is essential for the proper formation of a group. Eight to ten students, with equal numbers of males and females, is optimum. A specific mix of model, issue, and problem youth is important, with attention given to individual levels of socioeconomic status, levels of verbalization, achievement, socialization, and adjustment, in order to recreate a heterogeneous mixture of the school population. The group should represent a cross-section of the student body of the school (refer to Figure 1).

It is difficult to do group with fewer than 4 members or more than 10 members. Age span should be no more than two grade levels and never more than 48 months (mental age). It is important to take at least two students who have discipline problems, as well as two model students so that the group does not get labeled. One withdrawn child does very well in the group because he or she will learn from listening, and eventually will be drawn out by the other group members. The remaining three to five members of the group can be individuals with academic problems, substance abuse problems, other issues, such as children of divorce. It is important to have at least three or four highly verbal members, including one verbal discipline problem student. These verbal members will keep the group moving and will also provide an opportunity for other students to model their behaviors.

It should be noted that the farther from the above ideal group mix/composition, the longer it

Figure 1. Demographics of an *ideal* heterogeneous social skills group

Number of students	*Type of students to select for group*	*Notes*
2	Verbal/model students (but they learn too!)	Unofficial co-leaders
2	Socially/emotionally disturbed students reasonably verbal	One of these two should be
1	Quiet/non-verbal student	
3–5	Students with issues	Issues are academic problems, substance abuse, children of divorce, children of alcoholics, etc.

Additional notes:

- The mix of the group is the key to success. Group should represent a cross-section of the school.
- 8–10 students with equal numbers of males and females is optimum.
- It is difficult to do group with fewer than 4 members or more than 10 members.
- Social/economic status should be: half low to low middle class and half middle class to high.
- Students should be roughly of the same intellectual capacity.
- Limit group to two grade levels and never more than 48 months mental age.
  - Always take seniors by themselves
  - Sixth, seventh, eighth, and ninth graders should be separated by grade level
- Exclude anyone who is clearly too disruptive and/or refuses to consent to the rules.
- The farther that the *ideal* group mix is deviated from, the longer it takes to go through the developmental stages.

will take the group to go through the developmental stages and the more active the leadership style will have to be. For example, if a group is made up of all male socially/emotionally disturbed students, it is obviously a more difficult group to do, and it will be harder for that group to form cohesiveness as compared to a heterogeneous group made up of a cross-section of the school population as outlined above.

There are students who should be excluded from groups: Avoid anyone who is clearly psychotic, too disruptive, and/or refuses to consent to the rules. These types of students are too time-consuming and keep the group from passing through the developmental stages within the allotted time.

Often, groups are organized around a single issue, such as divorce, relocation, transitions, and/or alcoholic parents. Frequently, school psychologists are expected to lead groups composed of students with behavioral disorders, attention deficit hyperactivity disorder, or learning disabilities. Regardless of the initially presented problems, members bring to the group life experiences that are universal and those that make them truly unique. The similarities among the adolescents will bring the group greater cohesiveness, but clearly from their differences these adolescents will develop a greater understanding of the world in which they live. When a group is organized around a homogenous issue, such as children of divorce, the purpose of group (see RAPP described later) should be extended to include learning to cope with their parents' divorce as well as self-esteem, self-responsibility, and interpersonal skills. However, experience has taught the authors that once that unifying issue is addressed, the group functions like a heterogeneous group and only occasionally returns to deal with the initial presenting problem.

When a school psychologist is asked to lead groups composed of students with disabilities who have a primary resource teacher, it is strongly suggested that that teacher be selected as the secondary leader, if at all possible. That teacher will have a better data base and more extensive knowledge of the students, as well as being more aware of interpersonal dynamics and classroom episodes that add a richness to the group.

Since it takes longer for socially and emotionally disturbed students to progress through the developmental stages of group, they should meet more often, perhaps twice a week. The reason to meet more often is that the length of each stage will be extended from the developmental matrix (as explained later in this text). In the instructional stage of a group for behavior disordered students, many more war stories will be told, because these students have a need to establish their territory and to be heard. The telling of stories provides a comfort zone for them. However, the leader's job is still to shift students' focus to the here and now and to the issues that led them to be placed in the group. Individuals with these types of problems tend to blame their problems on other people. Thus the focus always has to be "even if that is true, how can you function in such a way to get these individuals off your back?"

When the mix of the group is not the ideal heterogeneous mix described earlier, leaders will need to be more active and provide more structure and control. The leader needs to model self-disclosure of here and now feelings on a regular basis. It is important not to discipline students within the group. For example, if a school operates on a level system, the students should not be given points or level ratings within the group or based on their behavior in group. Group must be separate and distinct from any discipline system used in the school.

MEMBERSHIP SELECTION

Prior to admission to the group, each student should participate in an individual interview. The interview can be conducted by either the primary or secondary leader. It should explain the purpose and the rationale for group, identify the leader and the co-leader, explain how students were selected, tell them where and when group will meet, and obtain agreement to participate and abide by the rules. In some cases when a student refuses to give an agreement to abide by the rules during the initial interview, it can be suggested that he or she think about it overnight and then be given a second interview to give his or her final answer before he or she is excluded from the group. The reason for permitting a student to "think about it" is because sometimes he or she will talk to another student who has been interviewed for admission to the group and then decide that it might be cool to be placed in the group. Ultimately, students who will not give an agreement to abide by the rules in the individual interview will create problems once the group begins and should be excluded before the initial session.

Equally important purposes of the interview are to screen for suitability, to obtain some database regarding social skills and the nature of the child's difficulties, and to examine the student's motivation and problem-solving abilities. Attempts should be made to develop a therapeutic alliance by working through the student's resistance to being in group during this time.

ESTABLISHING THE CONTRACT

During the first session, the primary leader can enhance group function by using a special format called RAPP: Rules, Approach, Purpose, and Phases. RAPP establishes the group contract and helps members better understand the group process. The purpose of the individual interview and RAPP is to create clear expectations, develop the structure, and define acceptable behaviors. In other words, RAPP establishes the group contract.

The most important part of both the initial interview and RAPP is the commitment to abide by the rules. Students will not keep all the rules. However, once members commit to the rules in front of their peers and then break a rule, what remains is an opportunity for students to learn from their mistakes that otherwise is not available to them outside of the group environment. For example, if confidentiality is broken in a relationship, in the world outside of the group, then it often follows that the relationship ceases and the offending person may not be aware of why this happened. Whereas, within the group environment, the breaking of confidentiality is dealt with by the group members who confront the individual who broke confidentiality and make him or her aware of his or her behavior. The end result is therapeutic for the offender. Certainly, given the example above, it can be seen how the processing of a rule break by group members is one of the values of the group experience. The members will deal with any rule breaking through the group process. All group members remember the agreement secured during RAPP and that agreement is indisputable. Therefore, a verbal commitment will be sufficient since the contract is between the group members and not between the member and the leader. The members will deal with any rule breaking through the group process.

By setting clear boundaries, the leader establishes security and a baseline for later behaviors. As nervous as the leaders will be in the first group session, the students in the group are more anxious. Giving them the security of knowing the expectations and the structure of the group will reduce their anxiety, as well as the leaders'. It will also help students understand how they relate to each other and will provide the opportunity to set the stage for further group sessions.

Task Two: Control and Protection

If the first task of group leadership is to construct the group, then the second important task is to maintain control and provide protection for the group members. Most important, the group must identify with the leader, who must establish and maintain a therapeutic leverage while at the same time encouraging maximum group self-direction.

The leader must be authoritative enough to ensure appropriate conduct. By not allowing scapegoating or cruelty to occur, leaders make the group a safe place to share thoughts and feelings. Leaders must be active, since non-directive, passive leadership creates ambiguity and increases anxiety. The leader must protect the individual's right to work on a problem and to use group beneficially. Conversely, the leader must maintain the individual's right not to discuss thoughts and feelings if the student is not ready. Group content and dynamics fall under the professional domain of the leader, who must exercise discretion with regard to the needs of the members and the group.

Monitoring the group's progress while eliciting appropriate behavior through each of the developmental stages of the group is the task of the leader. By ensuring each member's safety, the leader can foster a constructive, non-judgmental atmosphere where an emphasis on the feelings and reasons behind behavior emerges in the later stages of group development.

Task Three: Facilitation of the Processing of Thoughts and Feelings

The third task of group leadership is to facilitate the processing of thoughts and feelings. For this to occur, the group must focus on relationships and member-to-member interaction. Members must become allies in an open and honest atmosphere characterized by autonomy and self-respect. Members have to believe that if growth is to occur, they must bring it about themselves. Therefore, the students, not the leaders, become the "agent of change."

The leader must demonstrate experience and knowledge and is responsible for setting and shaping the group norms. The group leader must model appropriate behavior,, giving positive feedback for appropriate on-task behaviors by members. Norms must include giving and receiving appropriate feedback which is specific, direct, timely, and non-judgmental. "Say what you mean, mean what you say, and say it to the person's face." By following this saying in the group, other norms such as risk taking, honesty, openness, and talking in the here and now will be fostered. The leader should discourage individuals taking turns talking and/or allowing members to pass. The emphasis should be on discussing what is occurring within the group, between the members and leaders and not focus on outside events. Advice-giving and repeated questioning should be discouraged because it discourages individuals from bringing forth significant issues in their life. The leader should emphasize that each member is an integral part of the group and each member is as important as any other. The curative factor, cohesiveness, will develop if proper norms are modeled by the group leader.

TRUST

The fundamental ingredient in group is the universal issue of trust that surfaces early and is never fully resolved within the group setting. Early in the group, trust relates to trusting the rules and the process of group. Later in the group, trust relates to self-trust and issues of vulnerability. All adolescents come to the group feeling that they are imposters and inadequate. They do not feel that they deserve the recognition for the accomplishments they have received. Many believe that they have "just fooled people" rather than take credit for their successes. Members are afraid of being negatively judged by fellow group members and spend their time attempting to conceal their believed inadequacies. During the group process members will exhibit cover-up behaviors (i.e., attempts by students not to be open and honest) for fear of being rejected or seen as inadequate. What follows is that members will try to fake it or they will not try at all so that they have an excuse for not being successful. In the process of group, members will often try to impress other members or they will attempt to withdraw for fear that they will be seen as imposters. Part of the issue of trust in group is reflected in this concept. Therefore, it obviously follows that everyone has thoughts and feelings he or she is afraid to verbalize. It is the job of the group leader to establish a level of trust so that adolescents can explore these issues in an environment that is accepting and in which they can attempt to resolve these basic issues of the human condition.

DEALING WITH ANGER

The leader must generate feelings, step back, and allow the members to work through these emotions. Anger is the easiest emotion for adolescents to express, but frequently masks sadness and fear. Often leaders worry about anger in the group; however, "norming and storming" is an integral part of the group process. The leader can use anger to enhance the therapeutic value of the group by encouraging the members themselves to confront each other within the group. The leader can help the members be specific about their feelings and the behaviors that generated those feelings and, whenever possible, shift from the cognitive to the affective mode by indicating "I know what you think, but how do you feel?" The more clearly the leader can identify the underlying cause of the anger, the better the opportunity the group has to interpret the behavior appropriately and to relate the behavior exhibited in the group to behaviors outside the group.

DEALING WITH RESISTANCE

As anger always occurs in a group, so does resistance. Resistance is any behavior that moves a group away from areas causing discomfort. Generally, resistance comes about because members are angry, lack trust, or feel hopeless and helpless. Resistance may take the form of silence (withdrawal), defensive body language, intellectualization, or direct hostility toward leaders or other members. Sometimes resistance takes the form of lack of productive work, individuals changing the subject, or even absence from the group. Other types of resistance include private conversations, subgrouping, outside contact, and testing the rules.

It is important to remember that resistance in the early stages of the group is resistance to the process of group. Resistance later on in the group is a function of psychopathology. Defiance and antagonism usually mask fears. Adolescents are resistant when they feel lonely, scared, or frightened. Frequently, acting out is a manifestation of some type of negative resistance. It is important to set limits on acceptable behavior and to determine whether or not the inappropriate behavior is a deliberate act or a function of the student's emotional difficulties.

Task Four: Providing Insight

The fourth task of group leadership is to provide insight into problem behaviors. The timing of insight is crucial and one of the most important skills the leader must develop. The leader must judge the readiness of members to share their feelings, as well as the level of defenses of each individual in the group.

LEADER INTERVENTIONS

Interventions by the leader provide the "hows and whys," identifying antecedents of behavior and discovering incongruities between emotions and their associated events. Types of intervention include direct feedback, clarification, confrontation, and interpretation. All interventions produce consequences within the group. Some are positive and some are negative. In order to intervene, a leader must decide what is happening in the group, what changes are necessary, and what intervention will bring about those changes. It is best to intervene when there is difficulty with group functioning, when there is unconstructive and/or repetitive material, and when the material is not goal-directed. Not all interventions will be successful, but most will usually move the group in some direction, which is better than no movement at all.

Groups develop at different rates, but they go through predictable stages. Insight given in the working stage is clearly going to be the most beneficial. If an attempt is made by the leader to go too fast, then group resistance will increase, as evidenced by disruptive behavior, silence, or joking. The members will tell the leader by their behavior that the leader is pushing too hard and/or moving too quickly.

Insight is most effective when the leader is able to generalize the insight to more than one member of the group. By generalizing—or going horizontally—the leader reduces resistance and the members' idea that the leader is reading their minds. Leaders should avoid focusing on any one member and try to avoid being perceived as "brilliant analysts." After each successful intervention, the ability of the leader to move the group effectively to a higher therapeutic level is significantly increased. Whenever the leader wants to intervene, it is a good idea to wait (count to10) in the hope that a member will express the same insight. An insight expressed by a group member is always much more powerful than when the same insight is expressed by one of the leaders. It is much more important that students see the leader as their protector than as their "shrink." Always remember that insight provided by member-to-member interaction is more powerful than the identical feedback expressed by the leader.

On a practical level, each leader intervention will generally cause the group to regress until the group absorbs what the leader is teaching. Therefore, timing is crucial so that the group does not regress too far too quickly. After a significant and intense group, it is expected that the level of intensity will be less in the next group. This group behavior is generally due to the feelings generated in the group frightening the group members. The group needs room to breathe before the group can progress through the developmental stages again.

To clarify the above, consider group to resemble a seventh grade square dance. During a square dance the participants "dosi in and dosi back." As they get close to each other, group members will move back because group gets too intimate and too frightening; that is, they fear that they will reveal too much of themselves. It is *a seventh grade square dance* because in the seventh grade participants wait until the end of the dance before they start to become really close and intimate; likewise, the above behavior is analogous to the way members behave in group.

GROUP CONSTANTS

It is important never to remove a student from group for disturbing or misbehaving. In fact, it is not wise to dismiss a student from any group. All students fear rejection and abandonment and dismissing a student generates the feeling "there but for the grace of God, go I" for other group members. The overall effect is to lower the level of trust among all group members. Most of the students who are acting out are doing it with the goal of getting dismissed from group. Their misbehavior is a cover-up for the anxiety and fear that they are experiencing in the group.

There are many specific techniques for dealing with the student other than removal from the group. For example, if it is an individual problem, then the student could be given some individual sessions to deal specifically with a problem behavior that he or she is having in group. Another technique might be to handle the problem as a group problem so members can provide feedback to the student, saying, for example, "You're acting this way to be removed from group, just like you do in class"; and then the inside/outside technique could be used to show how acting out won't work in this case—that the group is going to work with the student so that his or her behavior improves. Note that whenever there is a problem in group functioning (such as illustrated above), the problem can be handled as an individual problem, as a group problem, or as both. Ultimately, how the problem is handled is left up to the discretion of the group leaders. (Additional sources/references are available in the bibliography.)

It is essential to the structure of the group that its setting be consistent. The group must meet in the same location, with the same furniture, on the same day, in the same time period, if at all possible. Groups are best conducted on Tuesday, Wednesday, or Thursday. Mondays and Fridays are more difficult because sometimes schools are closed on these days. All of the chairs in the group should be arranged in a circle and no materials (pencils, paper, books, and backpacks) are allowed in the circle. Desks should not be used. No seats are assigned; students should choose their own seats. Group members enter the group and choose a seat. For the initial session, the primary leader's and the secondary leader's seats should be marked, perhaps by placing a sweater or a coat or a "reserved" sign on their chairs. The leaders will sit opposite each other in the same seats all year long. If a member is absent, his or her chair is left in the circle. However, if a member leaves the group permanently for some reason, such as relocation, then the chair will be permanently removed.

Once everyone is seated, the primary leader asks if there are any questions or concerns and then the primary leader begins by saying, "What do you want to talk about today?" Group then continues for the scheduled length of time until approximately 5 minutes are remaining. Then the group leader says, "How did group go and how did you do?" The leader goes around to each of the group members, asking him or her how he or she did and how the group did. The leader starts with someone who is very verbal and goes around the group in order, then the co-leader goes, then the leader, and group is over. Note that it is important for the leader and co-leader to evaluate the group performance, but not their own; whereas with the group members it is important for each of them to evaluate the group performance as well as his or her own, respectfully, elaborating as much as he or she is able.

Some type of documentation of the events that occur within the group is needed. Generally, a summary of the group is prepared by either the primary leader, the secondary leader, or both together. The shorter the summary, the better. There are at least two options of how to do the summary. The first option is to list everyone's name and make a comment about each person in the group. The second option is to write a paragraph that generally summarizes the material, with limited detail and limited specifics of group processes/content. At a minimum, a copy of the summary can be kept in a locked file cabinet. Some leaders choose to place a summary on the seat of each participant in the group, allow the member to read it, comment, and then collect the copies and destroy them before the leader starts the group with "What do you want to talk about today?"

Notes About the Time-Line of Group Sessions. Leaders must minimize interruptions and disturbances as much as possible. A sign should be placed on the door saying "Group In Session" so that no interruptions occur. It is important that there be a clock in the room so that the students have a sense of when group will end. Groups should always start on time and end on time. Time of the group should not be extended even if important material is being discussed. Attendance in the group is mandatory. Neither leaders nor members will change. Regular attendance is a key to a successful group. Members should be aware that the more conscientious they are about group, the better group will be. This statement is even more true for the leaders.

The sequence of time during a typical group session is as follows: Generally group begins with a little bit of silence, then it moves toward the discussion of current events, then there is a period of a lot of talking with little sustained discussion. With 20 minutes to go group will *actually* begin. It is toward the end of group where the most vital information occurs. This is much like a boxing match in which there is a 3-minute round. If the students know that there is only 20 minutes to go, then they will begin to *fight*, much like a boxer does in the last 30 seconds of the round, because they know that they will be saved by the bell and because they want to talk, but they do not want to dominate the group.

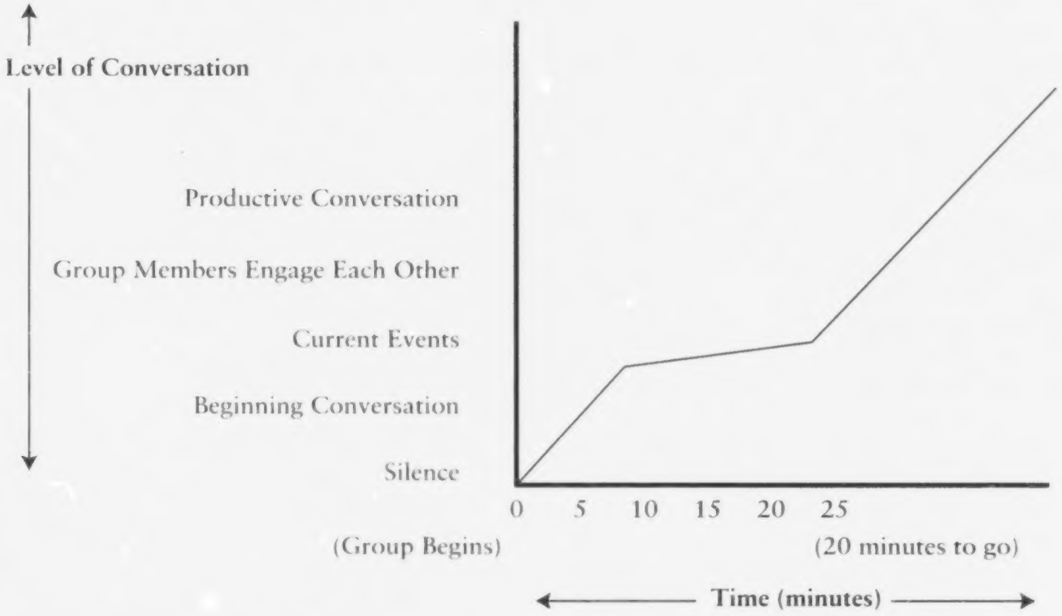
It is an interesting characteristic that all members come to group with the idea that they "would like to go third." They do not want to be the first to speak, nor do they want to dominate group or have all of the attention focused on them. For the reasons given above, the authors know, that as members learn the timing of group, they will learn, as do the leaders, that the last 20 minutes of a session is when the most helpful and productive aspects of group take place. (See Figure 2.)

TWO CONTRASTING MODELS

The information presented in this chapter is based on the Adolescent Counseling School Groups model, which was developed 15 years ago and has been successfully instituted in many school systems with many diverse populations, grades 5–12. After describing that model we will present an eight-session model, which we have implemented over the last 7 years. Both models have been nationally recognized and demonstrate the efficacy of the techniques, and information contained within this chapter.

The goals of the group counseling program are to increase self-esteem, to increase self-responsibility, and to improve interpersonal skills. Each group consists of 8–10 members and two group leaders. Groups are led by school psychologists. Secondary group leaders are volunteers from the faculty, including counselors and teachers. Group members are chosen with regard to their levels of achievement, adjustment, socialization, and verbalization, so that each group represents a cross-section of the entire student population. To this extent, each group should include high academic/low academic, well-adjusted/behaviorally problematic, extroverted/introverted, and verbal/non-verbal adolescents. Originally the program was designed to be preventive and to include all types of students, not merely children at risk or troubled. During the last 15 years the program has been expanded to include students

Figure 2. Time line: How time is spent in a typical group session



(Note that the 20-minutes-to-go phenomenon applies generally, irregardless if the group is 45 minutes or 1-hour-15minutes long.)

who are socially and emotionally disturbed, as well as groups for individuals with specific kinds of problems (e.g., divorce groups, children of alcoholics groups, and transition groups). The program described in the current chapter is time-proven to work in school systems and eliminates many extraneous variables that keep groups from being successful in a school setting. The nature of the population that is chosen affects the manner in which the leaders operate. In particular, the developmental model that is presented here requires more time if the mix of the group is not the heterogeneous representation of the school population described above. Deviation from the ideal mix requires the leader to be more active and extends the time the group spends in the Instructional Stage.

Students attend group once a week during a regularly scheduled class period for the entire school year. Once group sessions begin in early October, no students are permitted to leave group, and no new students are added. Students recognize their commitment for the full academic year and attend 30 group sessions. By maintaining the group's integrity, group cohesiveness, and mutual trust, salient forces in the success of the group process are fostered.

Structure is provided by the group leaders, but there are no planned activities or lessons. Students are encouraged to focus on thoughts and feelings, troublesome life situations, and other concerns group members may express. Within the confidential group setting, students have a forum to discuss problems and social issues that cannot be appropriately aired in the classroom. Typically, topics originated by group members include academic pressures, personal inadequacies, family concerns, substance abuse, suicide, rejection, peer pressure, and relationships.

Post-testing of all participants indicates that 63% of students with severe and recurrent behavior problems showed improvement in these areas. Parents and teachers state that more than 83% of students alter their behavior in a positive direction. Group members report that 75% felt better about themselves, 74% exhibit better peer relations, and 67% have improved attitudes toward their parents. Most dramatic is the statistic that 79% of the adolescents credit the group counseling program as having impacted favorably on these positive changes (Krieg, 1988).

When the school system and/or the group leader does not desire to do the 30-group session described in this text, the following eight-session group can be implemented using the condensed version of the year-long model. Essentially we find these groups to be more effective if the focus is on a specific issue or problem that results in a member being placed into the group.

Having a cross-section of the student population is less important than being able to identify a specific area for improvement. The shorter-term groups are particularly effective with students who have an issue such as truancy, aggressive behavior, defiance of authority, substance abuse, or any definable problem or issue.

The groups follow the same *Developmental Matrix*, and the group leader's tasks and roles remain unchanged. What does change is the style of leadership from less directive to more directive. The eight group sessions utilize the following format:

- Group I: Dyad technique and a shortened version of RAPP.

- Group II: The focus is on identifying the specific behavior or problem(s) that caused the member to be invited into the group.

- Group III: Functions as the Instructional Stage of Group.

- Group IV: The Rating Game. Using the same format as "taking the chair," the leader chooses a member who will give good and accurate feedback. A second member with a clearly identifiable problem is also selected. The first member using a scale from 1 to 10 picks a number that indicates how likely the second member is to repeat or replicate the same of a similar behavior. The member may choose just to state the number or may explain the justification for that rating. The leader then goes around the group in order, either clockwise or counter-clockwise, asking each member to provide a rating to the designated member. The secondary leader averages the rating saying, for example: "People think that on a scale of 1–10 with 1 being you are unlikely to repeat your problem behavior and 10 being that you are likely to do it, you scored a 4. In my opinion, I think you are more likely to be a 7." The secondary leader then continues on to explain the reason for the higher rating. After the secondary leader, the primary leader assigns a rating, and explains and offers suggestions for averting a reoccurrence of the problem behaviors. The procedure is used for the entire group so that each member receives feedback from all the other members.

- Group V: Functions as a Working Stage group focusing on the behavior and issues mentioned in the previous sessions. The leaders process thoughts and feelings and provide insight using the leadership techniques described previously.
- Group VI: Same as Group V.
- Group VII: The Rating Game. The procedure is the same as described in Group IV, but the rating for this session is based on "progress made in group." Discussion should focus on insights gained attempting to teach and reinforce positive behavior changes.
- Group VIII: Functions as the Termination Stage. The Group "takes the chair" as described later in this chapter.

The authors have found that through the use of this eight-session model, groups can be highly successful. Members also become more willing participants in future counseling efforts whether in individual and/or a longer term group. The key to success is to select members with as clearly a delineated problem as possible.

BEST PRACTICES

Group Developmental Matrix

Groups progress through predictable developmental stages. The more times the group meets, the more likely each stage will reach its full potential. To maximize the experience of positive personal growth, students should participate in a 30-week group. The 30-week time period permits the developmental stages of group to occur more naturally without the time restraints imposed by shorter term groups. Depending upon the author, these stages are identified by a variety of terms (see Yalom, 1995; and Bernard & MacKenzie, 1994). However, for the purposes of the current model, the stages of development will be termed:

1. Distrust
2. Instructional
3. Working
4. Termination

Each of these developmental stages will require differing leadership styles in accordance with the actions and reactions of group members so that the resulting process maximizes the efficacy of the group experience. (See Shechtman & Ben-David, 1999.) These actions and reactions of the group members will be identified as (a) participation, (b) anxiety, (c) resistance, and (d) cohesiveness (or PARC for short). The leadership styles to be discussed in these various developmental stages can be classified along a continuum. At each end of the continuum stands a definite leadership style. Figure 3 delineates the likely leadership style at each developmental stage of group and lists the likely general behavioral categories of group members at each developmental stage of group.

Like most things in life, little is completely black or completely white. Leadership style is frequently gray. The degree of emphasis that the leader places on each variable of leadership style will fall somewhere between the two extremes, depending on the group's behavior and the stage of group development. From this concept follows the notion of the four essential continuums to be considered when conducting group:

1. *The Content Versus Process Continuum. Content* represents what is said in the group, whereas *process* represents what is happening in the group. These two extremes should be viewed on a continuum from what is being said to what is happening within the group. There will be times when the group leader will focus only on the content and there will be times when the group leader will need to focus upon the process of the group. Depending upon which developmental stage the group is in, the leader will determine which spot along the continuum will be most useful.

2. *The Subjective Versus Objective Continuum.* This particular continuum will represent the level of self-disclosure that the group leader engages in. Subjective disclosure consists of two types: disclosure in the here and now and disclosure of personal

Figure 3. **Group Developmental Matrix: Developmental stages, group behavior, and the effect on leadership style**

Developmental stage	*Group behavior*	*Leadership style*
Distrust stage (Sessions 1– 6)	• Participation: low • Anxiety: high • Resistance: high • Cohesiveness: low	• Content to process • Subjective (here and now) • Group • Empathy
Instructional stage (Sessions 6–15)	• Participation: moderate • Anxiety: moderate • Resistance: high • Cohesiveness: developing	• Content to process • Subjective • Group • Empathy to clarification
Working stage (Sessions 15–27)	• Participation: high • Anxiety: low • Resistance: low • Cohesiveness: high	• Content • Subjective (personal) • Group and individual • Confrontation (insight)
Termination stage (Sessions 27-30)	• Participation: high • Anxiety: moderate • Resistance: low • Cohesiveness: very high	• Content • Subjective (personal) • Individual (taking the chair) • Empathy and confrontation (insight)

Excerpted from Krieg (1988).

history. There will be times when the group leader may choose to share a here and now feeling and there will be times when the group leader will choose to remain silent within the group. Self-disclosure of the here and now is always positive. Self-disclosure of a personal nature is generally not very helpful except perhaps in the working stage when the leader has gained acceptance from the group members. Group leaders may choose to self-disclose at this time if the topic is one that lends itself to that disclosure. All group leaders should always be careful about self-disclosures because some questions from the group members are really traps. Answering questions such as, "Did you smoke pot when you were our age?" should be avoided. These trap questions can result in much difficulty for group leaders. A good approach to those types of questions would be to respond "What makes you ask?" or "How can my answer to that question help you make your decision?" Leaders should never disclose personal information that may reflect on them poorly.

3. *The Group Versus Individual Continuum.* This particular continuum represents the approach that the group leader might take in deciding whether to deal with the group members as a whole or just one individual group member at a time. This decision will be made based upon the developmental stage of the group and the nature of the disclosure by the group member. For example, suppose that in the third group session, a student indicated that he or she had made a suicide attempt on the weekend prior to that particular group session. Given the preceding scenario happening in the third group session, the leader would want to focus on the process (not the content) by saying, "Isn't it good that Johnny felt confident enough and had enough trust in us to tell us about his experience?" The leader would then lead a generalized discussion about suicide, focusing on the universality of suicidal ideation. The leader would later end the group by saying, "Johnny, you and I need to talk afterwards," so that the group would know that the leader would take care of the problem, fulfilling the role of group protector. However, if the suicide attempt disclosure occurred in the working stage of group, it would be an appropriate time to focus on the individual, work on the issue of suicide as a solution to personal problems, and identify the problems that make individuals think about suicide. The leader could focus on the indi-

vidual, in this case, Johnny, going *vertically*, working on his problem in depth, and also go *horizontally*, relating the issue of suicide to other group members who at one time or another have entertained suicidal ideation (e.g., mentioned above). It is important to note that if the leader focuses on an individual too early in the development of group, such as in the distrust stage, then other members will be afraid to bring up intimate information because if they do that then they believe that the entire group session will focus on them. Although the leader might help the individual student in the third session, by doing so the leader will kill the group process.

4. *The Empathy Versus Confrontation Continuum.* This particular continuum represents how the group leader will respond to any given group situation. The group leader may offer an empathetic response or choose to confront the issue or the group member. The developmental stage of group, the nature of the situation, and the group member or members that are involved will all help to determine where along this continuum the group leader will respond. As a rule of thumb, it is important for the leader to remember: when in doubt, always use empathy. Empathy is always a positive experience. Sometimes confrontation will backfire and work against what the leader is attempting to accomplish. It is also important to know that there are times when group members need confrontation; however, if confrontation is used too early in the development of the group, the leader will find that the members will gang up against the group leader. Whereas if confrontation is used as a method later on in the development of group, then the leader may have a cheering section upon confronting a particular student or, even better, the cohesiveness of the group may allow the students to confront each other offering even greater therapeutic value.

Group Stages/Processes

THE DISTRUST STAGE: WEEKS 1–6

Limited participation characterizes the distrust stage as the group members do not know one another yet and they have not yet developed enough trust in each other to begin the process of group. Due to the limited participation by members at this stage, the group leaders will necessarily be more active. Group leaders can facilitate increased participation by using the DYAD technique. The DYAD technique serves as an ice breaker and a method to demonstrate that it is much easier to talk about facts than it is to talk about feelings. Group leaders can even use a prepared list of questions to help the students as they complete the DYAD exercise. For example, some possible questions that might be used for the DYAD technique are as follows (i.e., the person interviewing would ask the other person):

1. Tell me a little bit about yourself: Where you are from and what are your hobbies or interests?

2. What is a secret wish that you have?

3. Where do you hope to be 10 years from now?

The DYAD technique is implemented as follows: Group members should be divided into pairs, and they should use the prepared questions to interview each other. At the completion of the interview, group members will then introduce their partners. The purpose of the DYAD technique and the subsequent introduction is that it is easier to introduce someone else than it is to talk about oneself. This technique will reduce anxiety associated with the first group session. Group leaders should first introduce each other, thus giving the group a model of what is expected of each group member. This technique should take a large portion of the first group session—in fact, the longer the better.

Anxiety levels and resistance will be high at this stage of group. Anxiety can be reduced by the DYAD technique, and any resistance can be dealt with by the group leaders. This might mean some degree of coaching a group member through this process. There is also very little group cohesion at this time because the group members do not know one another yet.

During the distrust stage of group, the group leaders will generally be more concerned about what is the content (Establishing the Contract) than what is taking place (Process). Following the above DYAD technique, the group leader will want to use the RAPP sheet in order to help facilitate the content at this stage.

Group leaders will use RAPP as a script to help group members understand the expectations, structure, and process of group and how the group experience will benefit them.

In other words, RAPP is used to establish the group contract.

Rules. Rules have already been discussed in each individual interview. Each group member should already have agreed to the rules in private, but it is also necessary that each group member agree to obey the rules in front of their peers. These are some suggested rules:

1. *Confidentiality.* What is said in group must stay in group. Confidentiality is an extremely important rule because it serves to build trust. If the group members know that what is said will remain in the room, then the group members can be more honest and open with each other. It is important for group members to understand that all group leaders will abide by the confidentiality rule; that is, except where law prohibits confidentiality. This occurs in response to abuse and issues of danger to self or others. Group members need to be informed that disclosure of either of the above will need to be reported to the appropriate authorities. (Please consult local laws about this issue.)

2. *One person talks at a time.* This is an important rule because courtesy must be shown to others' opinions, ideas, thoughts, and feelings. It is very difficult to learn while talking but we can learn while listening. As Covey (1989) teaches, "Seek first to understand, then to be understood" (p.237).

3. *No one leaves group without permission.* This rule is important because there may be times when the group conversation will be uncomfortable. Even if the member is uncomfortable, it will be necessary for that member to remain in the group. Group is a class and a student cannot leave class without permission.

Generally the fewer rules that there are, the better group will be; this is particularly true in the early developmental stages of group. The above are the three stated rules of group. Other rules can be added later as they surface during the group and need to be addressed by the leaders or group members. For example, gum chewing or cursing can be eliminated by saying that group was originally established as a class and those behaviors are not acceptable in class, and such a rule could be added later. The problem is that if there are too many rules initially and the group leader makes an issue out of trying to enforce these rules, then the more testing of these rules will be done by group members. The more rules early on, the more testing that will follow by group members. The rules that are important are the above three main suggested rules because they are reasonable to members and make it possible for group to function.

Approach. The focus of the groups will be about how members feel and how they feel about what happens to them. Students will be talking about here and now feelings, or how they feel about things at this time, not about past feelings or what others may have done at another time. In group any topic is allowed as long as it deals with the three purposes of group: improving self-esteem, self-responsibility, and interpersonal skills.

Purpose. The purpose of group is to improve the three areas listed below and to gain an understanding of the effects of one's behavior on others. Members need to improve their understanding of themselves and how they feel about themselves.

1. Self-esteem
2. Self-responsibility
3. Interpersonal skills

Phases. Groups will go through predictable, necessary phases. These phases are like stages of development when a child learns to walk by crawling first.

- *Phase 1, Distrust.* Group members are nervous because they do not know what to expect. This nervousness will take time to go away, but this time will be well spent. Like building a good friendship, exposing their true selves takes time.

- *Phase 2, Instruction.* Group is like peeling an onion: it gets sweeter toward the inside. In this stage members will feel more comfortable with each other and will begin to talk more openly to each other. Trust will be developed as members learn "A friend is someone who tells you what you need to hear, not necessarily what you want to hear." During this stage members will learn about each other and how group really functions.

- *Phase 3, Working.* In this stage, members will feel much more comfortable talking to each other and will feel more comfortable talking about more important issues. The group will focus on personal issues that are pressing for the member and to each other.
- *Phase 4, Termination.* There is a beginning, a middle, and an end to all groups, and as is the case for the weekly sessions of groups, each group session will have a beginning, middle, and end. Sample script: "When you come into group there will be a summary of the preceding group session on your chair. We will read it to review what happened last week, correct it, and destroy it, so as to keep the group rule about confidentiality. Then, I will begin the group by saying, 'What do you want to talk about today?' Then the group can discuss whatever it chooses as long as it is consistent with the approach and purposes of group. With about 5 minutes to go, the group leader will end each group session by saying, 'How did group go, and how did you do today?' Then each group member and leader will go around the group and answer that question."

RAPP concludes by going around the group and having each group member and leader confirm his or her agreement to abide by the rules of group.

Once RAPP is complete and each member commits to the group to keep the rules, the group leader can move on to a discussion about trust. A discussion about trust might be started by the group leader after asking, "What do you want to talk about today?" and following some silence, and then asking, "Do you trust each other?" Thus, RAPP represents content, and trust will begin the process of group in the early stages.

Trust is the key ingredient for the group at this time, hence the name Distrust Stage. The group leaders should focus upon the entire group at this time because premature concentration on any one individual can escalate the feelings of anxiety within the group. Questions that can be asked at this time include:

1. Why is this stage of group called the distrust stage?
2. How do we learn to trust?
3. Is there trust within this group?

Some answers that are likely to be heard are as follows:

1. I trust everybody in the group.
2. I trust no one in this group.
3. I trust everyone but (name) in this group.
4. It will take some time to learn to trust.

The "correct" answer would be choice 4 because creating trust is like building a friendship. However, the correct answer is less important than allowing as many members to talk in group as possible. Trust is a topic that most students feel comfortable talking about because it is not personal. Therefore, trust is an easy place to start members interacting with each other. The one exception in letting group members talk freely is a situation in which a member would give answer 3, which could result in one student scapegoating another. If a group member is identified as one who cannot be trusted, it will be necessary for the leader to redirect this conversation so that all group members are protected.

In the remaining weeks of this stage, members converse with each other mostly about non-consequential matters in order to reduce anxiety and resistance while building trust and cohesiveness. The group moves from content to process in the distrust stage.

THE INSTRUCTIONAL STAGE: WEEKS 6–15

The next 9 weeks of the group are the instructional stage, a period of time when group members are getting to know one another and to be more comfortable with the group process. The group leader is not very concerned about content at this stage, but is more concerned about process. This means that the group leader is pleased that there is conversation rather than silence. It is not important what is being said; what is important is that the group is talking. Group members are learning what is expected of them and what the appropriate norms for behavior and discussion content are to be. The development of cohesion is the key ingredient for the group at this stage. Individual participation will increase to a moderate level as individual resistance begins to decrease. This resistance will decrease because the group members will be more comfortable with the group process.

Anxiety levels will be decreasing as each group member begins to be more actively involved in the group process.

The group leaders will continue to focus upon the group as a whole and not focus upon any one individual. It is still too early to concentrate on any one individual. It is also too early for any confrontation; therefore, the group leaders will maintain an atmosphere of acceptance and empathy. However, inappropriate behavior should be dealt with in an appropriate manner, preferably by ignoring or using another instructional strategy. Group members' misbehavior needs to be addressed in order to protect the group process and to teach group members appropriate group behavior.

At this time the content of group verbalization needs to be narrowed in scope. This process can be characterized as if proceeding through a funnel that narrows the further along the process goes. The large end of the funnel represents an agreement that initially any topic of discussion is permissible.. The narrower area of the funnel represents an attempt by the group leader to guide the group toward more relevant topics which center around the purpose of group: self-concept, self-responsibility, and interpersonal skills. Leaders narrow this focus by asking, "What does that have to do with group?" A new set of norms will be established in regard to topics for discussion which focus on the purposes of group.

Group leaders will attempt to move the group to a discussion about feelings instead of facts. This can be accomplished by stating, "I know what you think about that subject, but how do you *feel* about it?"

The group leaders will keep their own self-disclosure to here and now feelings and not disclose personal history during this stage of group. It is more important that the group members are talking to one another. This stage ends when the group members feel comfortable enough to share meaningful material in appropriate ways, the beginning of the working stage.

THE WORKING STAGE: WEEKS 15–27

The next weeks of group are characterized as the working stage. This stage of the group is considered the core of the program. It is at this stage of the group that cohesiveness develops and the group functions as a *group* rather than as a set of individuals. During this stage, group members are more willing to deal with fundamental concerns of a personal nature and to deal with issues that require some degree of personal self-evaluation. The group members will be more open, honest, and interactive. Individual resistance and anxiety are much lower at this stage because the group members know each other and what is expected of them in the group process. Group cohesion has formed and will enable group members to be more interactive.

The leadership style at this stage of group can be characterized by more attention to an individual and less focus upon the entire group. The process can be viewed more as individual therapy with a cheering section than as individual therapy with an audience. Confrontation can now be used as an effective intervention because individual members are more ready to receive constructive assistance. Empathy is always a good approach in the group setting, and should not be forgotten at this time.

THE TERMINATION STAGE: WEEKS 27–30

The rule in terminating a group is that 10% of the total number of sessions of a group should be devoted to the group's termination. Translated for the current model, this means that the last 3 weeks of group would be considered the termination stage. There is an equally important beginning, middle, and end to all groups. Termination is often overlooked or ignored, but this is a very important part of the group process. Termination is important because it supplies a concrete ending to the group. The termination stage affords an opportunity to summarize any growth and to demonstrate progress that has been made within the group setting. The termination stage provides an opportunity to give feedback to other group members and to teach/practice skills in being able to give feedback to others. The termination stage is simply a time when group members can learn to express an appropriate goodbye. Group members will reach this stage of group with two differing sets of feelings:

- "I am glad that this is over."
- "I am going to miss group" (meaning they will miss being with their new found friends).

This stage of group is marked by high levels of participation because all members have been part of the group process and know what is expected of them.

Participation may be lessened by the fact that some individuals do not want the group experience to end, but, for the most part, group members will readily participate at this stage. Resistance levels are generally low, except in the case of an individual who does not know how to deliver a goodbye appropriately or to deal with feelings of sadness about leaving the other group members. Anxiety levels will increase some at this stage because of the change that ending group represents. Students have a difficult time with transition, and the termination process provides an opportunity to experience transition in a controlled setting. The group members will continue to have a high level of cohesiveness which will aid in the termination process.

The leadership styles will be characterized by focusing upon the process of termination, as well as on the content of the goodbye statements. The group leaders will be able to focus upon individual group members, as well as upon the entire group. Empathy will be the key ingredient as the group leaders attempt to understand how each group member responds to the termination process. Confrontation should only be used in the event that a group member chooses not to participate appropriately in the termination process.

The group leaders will be free to be very much involved in this stage of group and to express their own subjective feelings about each group member and the degree of growth that has been demonstrated.

The termination exercise "taking the chair" is extremely effective. This exercise serves as a method for each group member to give and to receive goodbye statements and final words of advice or encouragement to and from all group members. This exercise also serves as a "graduation" from the group. This process covers the final three weeks of the group.

Countdown Week 3 (i.e., 2 more meetings until the last session). The group will continue as normal, but the group leaders will inform group members that the time for the group to terminate is coming very close. Members will begin to prepare for termination.

Countdown Week 2 (i.e. the next to last session). The group leaders should be very active at this group session. An attempt to generate a non-specific discussion about termination of the group, feelings about ending, and any perceived progress should be made at this time. This is a sample script: "We have been part of the group for the last 29 weeks. We have all grown in some manner. We have learned to be more responsible, we have learned to get along with each other, and we have learned to feel better about ourselves. We have all benefited from this process. We have learned to share feelings with each other and have discovered that we are more alike than different. We have developed some new skills, and we need to continue using those skills outside of group."

> Question: "How do you feel about leaving?"
>
> Wait for answers: "I'm glad it is over." "I will miss group."
>
> Question: "What are some things about yourself that have changed?"
>
> Question: "What do you like or not like about group?"

End this group by suggesting that during the next group we will do something special. There will be an activity designed to say goodbye to each other and to summarize our progress. Do not disclose the nature of the activity.

Countdown Week 1 (Last session). "Taking the chair" is a very important part of the termination process. It gives all group members an opportunity to express their feelings and to share their feelings with each other. Even the most negative things will come out in a positive manner during this process. Feedback from each of the group members and the group leaders demonstrates how much has been accomplished. The purposes of "taking the chair" are to find out how much was accomplished and also to end group on a positive note. This is the procedure:

An important procedure is for the primary and secondary leaders to decide ahead of time which member will receive comments first. They should pick someone who will draw positive feedback from the group. Also important is that a member should be chosen to start giving the feedback in the process, someone who is highly verbal and who will make positive comments.

The primary leader should demonstrate the process by providing feedback to the secondary leader which serves as a model to demonstrate the procedure "taking the chair." The leader could say, "You have been a good co-leader; you have been very supportive and helpful. I think you have done a good job handling the summary sheets, and I really have valued having you in the group with me," thus giving an example of some of the positive things that happened. Then, the leader could add, "I kind of wish that as a co-leader that you would have talked earlier, because I've noticed as this group has progressed you've talked more, and that's been very helpful to me and to the group." By giving both positive feedback and identifying areas to improve, the leader has modeled the process for the group members.

The leader will pick a target person to start the feedback process. That person, again, should be someone who is verbal and will say positive things. Then the process should proceed either clockwise or counter-clockwise, depending on which direction will give more positive information or will offer more time to get to someone who might give negative feedback or who might be very withdrawn and/or nonverbal an opportunity to learn the process. It is important to note that once the pattern/direction around the circle begins, it is locked into. Do not go out of order; do not break the chain. In a situation where the person who receives the feedback first is one seat or two seats away from the person preferred to give it, have two people go and then skip the person receiving the feedback and continue to stay in the same order.

Encourage group members to give honest and constructive comments to each other. If positive or beneficial feedback is not obtained or if members do not understand what is expected of them, stop the process, role model again for them (it is important to teach them what is expected), and then go back and start over. The rules are the following:

1. The person receiving the feedback may not reply to anyone else's comment after the person says it. He or she must wait his or her turn until everyone, including the leaders, has given his or her feedback to make any kind of reply.

2. The members must talk to the person on the chair, not about that person. For example, do not say, "John did pretty well"; instead say, "You did very well."

3. Everyone in the group must say something even if he or she has to wait to think of something, or has to be coached a little bit. Every person *must* talk in turn. The process may take some time, but is absolutely essential. Even the most withdrawn member will say more and more as the process develops.

Primary and secondary leaders need to give feedback last (with the secondary leader going first and the primary leader going last) after each group member has given his or her feedback to the person receiving the feedback and before moving on to the next group member. After all the members have given feedback and before the secondary and primary leader give feedback, the primary leader should ask if anyone has anything else he or she would like to add before the leaders take their turns. The person on the chair may respond and/or answer questions at this time. Then the secondary and primary leaders give their feedback to the person in the chair and go on to the next member (who then *takes the chair*). The process continues until each group member has "taken the chair." The primary and secondary leaders are to receive feedback from the group members (i.e., *take the chair*) only after all of the group members have taken the chair and received feedback. The leaders will find it very beneficial to discover what the group members have to say about them.

SOME IMPORTANT REMINDERS

One of the primary tasks of group leaders is to protect the group members. Therefore, should, for some reason, the process of *taking the chair* go sour and the group gang up or dump on one of the members, then the leader should stop the process, reemphasize the difference between constructive criticism and being cruel, and then begin the process again from that point. Group members are not allowed to scapegoat one another.

This process may run over the allotted time; therefore if the process is running late, a counselor, another school psychologist, or principal must be available to cover leaders' classes. The secondary leader should go out quickly and notify the appropriate person so that arrangements that have been made can be enacted for class coverage.

Spontaneity is the key to making this entire process work. For that reason, in the next to last session do not tell the members exactly what will happen during the last meeting. Both leaders can lengthen or shorten the time it takes to complete this process by the length of the comments they make. They are the key in keeping the timing as appropriate as possible. However, this may be the most meaningful event of the year for group members and/or group leaders, so do not rush this process.

SUMMARY

Of the numerous primary intervention modalities available, school counseling groups certainly should be considered one of the most efficacious and cost effective interventions in terms of how time and financial resources are used. We have presented a brief history of the use of group counseling, as well as an empirical basis for the use of group counseling as a viable intervention for school children with emotional, social, and learning dysfunctions. Two different models of school counseling groups were discussed. First, an 8-week model, followed by a more detailed discussion of a much longer, 30-week model.

Various aspects of the procedures of group counseling and the processes involved were delineated. First a discussion of the *mechanisms of change in group counseling* was presented, which included cohesiveness, universality, insight (i.e., Insight x Action = Change), and the inside/out mechanism.

Next, *problems in group leadership* was discussed, with focus on two primary paths for the leader to consider when conducting a group meeting: (a) permitting a problem to take its course, which builds group cohesiveness quickly, but which also presents with greater difficulty; or (b) the "head-it-off-at-the-pass" approach, wherein the group leader identifies a problem before it happens, thus providing more safety, but must play a more active role in resolving issues presented.

Other areas of group leadership were also considered, including *the four tasks of group leadership*. Task one, *constructing the group* outlined (a) the basics of group leadership, (b) the demographics of group makeup, followed by a discussion of (c) membership selection and (d) initial commitment on the part of the group members and group leaders.

Task two of group leadership was described as providing *control and protection*, which outlined how a group leader creates a safe environment of trust that facilitates group member participation. The third task of group leadership examined was *facilitation of thoughts and feelings*, which overlaps task two, and included delineation of issues of *trust*, *dealing with anger*, and *resistance*. The fourth task of group leadership was entitled *providing insight*, which looked at *leader interventions* and *group behavior*.

The *Group Developmental Matrix* was discussed, including details regarding the four different stages that all groups go through (a) distrust, (b) instructional, (c) working, and (d) termination. Paralleling the Group Developmental Matrix, the chapter reviewed four different variables the group leader must process while leading a group. The four continuums that occur during group counseling are (a) the Content versus Process Continuum, (b) the Subjective versus Objective Continuum, (c) the Group versus Individual Continuum, and (d) the Empathy versus Confrontation Continuum.

It is appropriate to be intimidated by the thought of leading a group of youth through difficult life issues; you learn by doing. Start as a secondary leader and learn the power of the group process. Learning to do group is an apprenticeship skill that can only be learned with adequate supervision. The authors encourage those interested in understanding more about group counseling to review the references and annotated bibliography included as a part of this chapter, and then, do group.

AUTHOR NOTES

The authors gratefully acknowledge the assistance of Patricia S. Gaston, Ph.D., and Claudette Wassil, M.A., in the preparation of the initial drafts of this chapter.

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III.

Focus on Assessment Domains and Special Populations

76

Best Practices in Assessment of Intervention Results With Infants and Toddlers

Charles R. Greenwood, Gayle J. Luze, and Judith J. Carta
Juniper Gardens Children's Project
University of Kansas

OVERVIEW

Public policy (P.L. 99-457, amended by P.L. 102-119) mandates that preschool-aged children with disabilities and their families receive early intervention services, and many states have extended these services to families with infants and toddlers (DEC, 1993). While states vary with regard to the ways in which they identify and serve infants and toddlers with developmental needs, the school psychologist often serves a key role in determining eligibility for services, linking children and families to appropriate interventions, and then determining whether interventions are truly meeting children's and families' needs. This chapter focuses on the role of the school psychologist in carrying out those functions. Specifically, the paper will describe the basic knowledge and skills school psychologists need in addressing the unique challenges in assessing infants and young children. Then the chapter focuses on the emerging area of assessing early intervention results and offers a specific approach for progress monitoring for infants and toddlers being developed by the Early Childhood Research Institute on Measuring Growth and Development (ECRI-MGD).

BASIC CONSIDERATIONS

Infants and toddlers present an array of challenges to the school psychologist who is attempting to determine whether a child is eligible for early intervention services, for what programs the child is best suited, and then whether the early intervention services are making a difference in improving the child's developmental outcomes. These challenges include but are not limited to what follows: first, the difficulty most young children have complying with a predetermined structured protocol in light of the need for comparing children across somewhat standardized conditions; second, the need for assessors to gather representative samples of children's behavior in light of the short amount of time infants and toddlers will stay engaged with a task; third, the need to elicit information about what skills young children can perform in light of the difficulty many young children have with unfamiliar adult assessors or novel situations; and fourth, the need to include the perspective of parents regarding children's skills, needs, and progress in light of the limited amount of time family members have for providing this type of information (Preator & McAllister, 1995; ECRI-MGD, 1998b).

For young children with developmental delays, the critical characteristics and recommended practices of assessment were described in Division for Early Childhood's (DEC) 2000 report, "DEC Recommended Practices in Early Intervention/Early Childhood Education." Among the criteria for evaluating recommended assessment practices cited in this report were the following: (a) They should point to behavioral objectives for change that are judged important and acceptable, (b) they should guide change in treatment activities, (c) they should incorporate several instruments and scales including observation and interviews, (d) they should incorporate input from parents, and (e) they should be used on multiple occasions (Neisworth & Bagnato, 2000). Clearly, psychologists and interventionists qualified to assess infants and toddlers must have a range of specialized knowledge/skills that goes beyond the administration of standardized tests.

Background Knowledge and Skills

Examiners must be knowledgeable about the unique challenges of assessing young children and understand the developmental milestones of early childhood. Because infants and toddlers are just learning to communicate, talk, interact, and move, the behaviors to be assessed and the methods employed to conduct assessments are different and specialized when compared with those of older children. Psychologists' skills using naturalistic observational and play-based assessment are particularly important because they are more likely to engage young children's attention, reduce children's fears, and set the context for children to emit a range of developmentally appropriate skills compared to traditional testing methods. Skills with measures capable of tapping sources of information from the parent and other caregivers are equally important because of their unique and detailed knowledge of what the child in their care knows and what their child can do. School psychologists must also be prepared to work with colleagues across disciplines and settings that typically serve infants and toddlers. Specifically, examiners must be experienced working with parents, early intervention teachers and service coordinators, pediatricians/nurses in the medical center, ancillary staff such as occupational therapists and speech and language pathologists in the clinic, and childcare professionals in community-based settings.

While this set of skills broadly outlines some of the competencies needed by school psychologists in working with infants and toddlers, there is a critical need to move beyond determining eligibility and linking children and families to programs. With the current national focus on accountability for services, taxpayers and policy makers and parents want to know that services provided are effective (Kagan, Rosenkoetter, & Cohen, 1997). In response, states have scrambled to develop accountability systems for children receiving early intervention and preschool services. Thus school psychologists must have the knowledge and skills to assess the results of early interventions.

PROGRESS MONITORING AND PROBLEM-SOLVING CONCEPTS AND SKILLS

School psychologists are often in critical positions to determine whether children are truly benefiting from the early intervention services they receive. Thus, there is a growing realization that psychologists who work with the youngest children and their families must have the competencies to examine whether these children are making progress as a function of these services. The general and specific concepts of progress monitoring and the problem-solving models that are described by Dave Tilly, Roland Good, Scott McConnell, and others elsewhere in this volume are also relevant to work with infants and toddlers. School psychologists need knowledge and skills in nontraditional approaches to assessment that are sensitive to the incremental growth that children will experience within early intervention programs. Three types of assessment particularly relevant to child-based intervention are behavioral assessment, mastery monitoring, and general outcome measurement. *Behavioral assessment* is measurement linked to one or more target behavioral objectives. *Mastery monitoring* is measurement linked to skills in a task analysis hierarchy with skills taught one at a time. In this approach, new assessment is applied to each new skill. *General outcome measurement* (GOM) is assessment linked to a range of key skill elements with the same skill set assessed each time (Deno, 1997). Progress is indicated by change/growth in single behaviors (performance monitoring), or skills (mastery monitoring), or increased proficiency on a set of key skill elements (general outcome) that are repeatedly measured. For infants and toddlers, measures must include the following domains targeted through early intervention: communication/language, motor/movement, social interaction with adults and peers, cognition/problem solving, and adaptive/self-help (e.g., Hebbeler, Simeonsson, & Scarborough, 2000; Priest et al., in press).

Additionally, school psychologists need skills and resources to determine how to change an intervention when it does not appear to be working. They need to be knowledgeable about a range of methods to explore solutions and change intervention strategies designed to affect growth in progress monitoring measures (ECRI-MGD, 1998b). These assessment activities may include observing child-caregiver interaction in natural settings, directly assessing child skills during their typical activities and routines, and/or evaluating features of the particular program(s) in which the child is enrolled. Such measures could then be used to form intervention hypotheses such as changing parent and caregiver interaction to increase growth in language or altering the childcare environment to facilitate more opportunities for communication. Intervention changes such as these may then result in accelerated child progress.

Why is Assessment of Intervention Results Important?

Quite clearly, the assessment of intervention results is important because of the usefulness of this process in providing direction about early intervention for young children. A fundamental tenet of educational psychology is that the success of any instructional intervention should be based on its effect on learning; and that future intervention be modified based on whether the child changes, grows, or learns (Corno & Snow, 1986). Over the last 20 years, the most dramatic methodological advance regarding assessment that is sensitive to instructional interventions has been the development of Curriculum Based Measurement (CBM) (e.g., Shinn, 1989). The CBM measures of reading in school aged children, for example, based on the work of Deno and his colleagues (Deno, 1997) have been demonstrated to be valid, reliable, and sensitive to instructional interventions. Similar measures have recently been developed for use with younger children (e.g., Kaminski & Good, 1996) to assess emergent literacy skills. And, more recently similar measures have been developed for measuring growth of infants and toddlers (Luze, Linebarger, Greenwood, Carta, & Walker, 2000) among others (see Table 1). An example of the application of "CBM-like" measures in the area of expressive communication of infants and toddlers appears later in this chapter.

Why Are Current Measures Not Adequate for Assessing Intervention Results?

According to Bagnato and Neisworth (1991), individual program planning to bring about change in child performance is the ultimate goal of early intervention services for infants/toddlers and their families. Yet, traditional forms of early childhood assessment often do not provide information useful in intervention development and making individual programming decisions. In traditional assessment frameworks, assessment and intervention are often treated as completely separate activities (Meisels, 1996).

For example, *eligibility* for services is the first-order question answered by traditional forms of testing (Bagnato & Neisworth, 1991). While norm-referenced measures are appropriate for comparing an individual child against an established norm group to determine a delay or discrepancy from the norm, they do not provide information appropriate for intervention development. If a child is determined to be eligible, then a new set of assessments is given including criterion-referenced tests, interviews and questionnaires with parents, and formal/informal observations of the child's behavior in home and school settings to determine a child's *needs*. Criterion-referenced tests (e.g., Assessment, Evaluation, and Programming System for Infants and Toddlers (AEPS) (Bricker, 1993) can provide some information

Table 1. Key skill elements in six different general outcome measures for infants and toddlers

Expressive communication	*Social interaction*	*Movement*	*Manipulation*	*Cognition*	*Adaptive behavior*

• Gestures
• Vocalizations
• Single words
• Multiple word utterances
	• Adult social turn
	• Peer social turn
	• Negative interaction
		• Transitional movement
		• Locomotion
		  • Grounded
		  • Vertical
			• Reach/grasp/release
			• Compound manipulation
				• Attention
				• Problem solving
					• Self-help

for determining a child's specific needs and aid development of the Individualized Family Service Plan (IFSP)/Individualized Education Plan (IEP).

Then, after a need is identified and an intervention developed, a new set of assessment tools is used or developed for *progress monitoring* and *evaluation of growth*. Norm- and criterion-referenced tests are often used to evaluate the effectiveness of a program or intervention. Unfortunately, none of these measures can be used frequently enough by early interventionists to plan and evaluate in an ongoing formative way the interventions used with individual children. These separate steps and sets of tools in the traditional model usually provide information adequate enough to answer the questions being asked (i.e., eligibility, need, progress), but they are not linked in a synergistic and efficient manner. Parents, teachers, support personnel, and children often spend too much time and effort in the collection of all of this information with too little benefit (McConnell, 2000). This often results in a process of information collection that is redundant and not useful for intervention purposes.

School psychologists have been encouraged to help resolve this pervasive problem in the assessment of intervention results for young children. According to Bagnato and Neisworth (1991), the solution encompasses the following: (a) tailoring assessment to the individual needs of each child, (b) determining eligibility for services, (c) linking assessment with early intervention, and (d) communicating assessment results to parents and other professionals. Assessment approaches of this type such as CBM or Dynamic Indicators of Basic Early Literacy Skills (DIBELS) (Kaminski & Good, 1996) for kindergarten and school-aged children have only recently emerged for use with very young children (ECRI-MGD, 1998a; Luze et al., 2000).

One explanation of the late emergence of intervention-linked assessment and decision-making models in early childhood are the unique challenges in working with young children described above. But another reason that this approach has been slow to influence early intervention has been the difficulty in translating the general outcome model of curriculum-based measurement to the relatively unstructured "curriculum" of interaction and play that children experience in their homes, childcare environments, and early intervention settings. For the most part, the curriculum that has been the focus of CBM has been academic/literacy skills. Determining the curricular focus of CBM for very young children in the absence of standardized curricular areas has been puzzling. What key skill elements should be assessed for children 6, 12, 18, 24, 30, or 36 months of age? Which general outcomes and key skill indicators are needed? The emerging solution of this problem has been to measure multiple behaviors known to be indicators of the general outcome and known to change over a particular period of early childhood (ages 0–3) and to evaluate a child's proficiency with these skills at a particular age against peer norms and rate of growth over time. In conclusion, any system used for assessing intervention results for infants and toddlers must address the challenges of working with younger children and at the same time overcome the limited applicability of existing assessment tools.

BEST PRACTICES FOR INTERVENTION RESULTS WITH INFANTS AND YOUNG CHILDREN

Best practices in the assessment of intervention results with infants and toddlers involve use of a decision-making framework with GOM progress monitoring to guide and adapt interventions. The particular advantages of this approach include (a) repeated measurement of progress in the natural setting, (b) graphical representations of the data that provide direction about the intervention, (c) tools that allow improved communication with parents and collaborating professionals, and (d) the ability to assess immediate growth in the absence of a detailed specification of objectives/skills sequences as are needed in both behavioral assessment and mastery monitoring approaches. Use of a decision-making model with GOM progress monitoring also meets the best practice criteria used by DEC (2000) in its selection of recommended practices. DEC criteria include the following: a research- or value-basis, a family centered focus, a multicultural emphasis, cross-disciplinary participation, developmental appropriateness, and a normalized experience.

An example of such a system is one currently being developed by the Early Childhood Research Institute on Measuring Growth and Development (ECRI-MGD, 1998b). It is a decision-making model supported by GOMs and has been specifically designed and validated for use with infants and toddlers (see Figure 1). This system is based on a series of descriptive, correlational, longitudinal, and experimental intervention studies that validated general outcomes and that developed and then established the psychometric properties of the measures of each outcome, including technical adequacy and peer norms (Priest et al., in press; Luze et al., 2000).

Embedded throughout the decision-making model are multiple points of input, choice, and evaluation from the family so that they can participate in decisions regarding the need for the intervention, the type of intervention, the effectiveness, and whether they are satisfied with the intervention (see shaded areas, Figure 1). The model meets the DEC multicultural criteria primarily because it can be used in the context of any language, and the tasks and materials used are those typically available in most modern cultural contexts. In addition, the model and measures were developed with input and participation from a diverse group of families representing a wide range of ethnic and sociodemographic backgrounds. Participation of a range of disciplines and professional practitioners in the program of any one child is supported through specific planning steps, measurement activities, and decision points in the Exploring Solutions section of the model. The model is developmentally appropriate and normalized because the contexts for assessment allow children to engage in toys and interact in unstructured situations that are fun and typical for their age.

The ECRI-MGD decision-making model has several features in common with similar problem-solving models (e.g., Deno, 1989; Kaminski & Good, 1996). Five major steps are completed that lead from identification of a performance problem to the determination of whether or not the problem has been solved. These steps are (a) identifying the problem, (b) validating the problem, (c) developing and implementing a potential solution, (d) evaluating whether or not the solution is working, and (e) evaluating whether or not the problem has been solved. Two distinct forms of assessment are used: Individual Growth and Development Indicators (IGDIs) (the left-most column in Figure 1) and Exploring Solutions Assessments (ESAs) (the right most column in Figure 1). The IGDIs are used to monitor growth and proficiency over time, and the ESAs are designed to inform intervention planning and implementation activities.

Selecting a general outcome of concern and then monitoring its progress by using the appropriate IGDI provides the basic information on an individual's level and rate of growth, thus supporting decisions of problem identification and problem validation. ESA activities fulfill an array of functions from targeting interventions with the highest likelihood of success to measuring their fidelity and ability to accelerate progress as measured by the IGDI (refer to Figure 1).

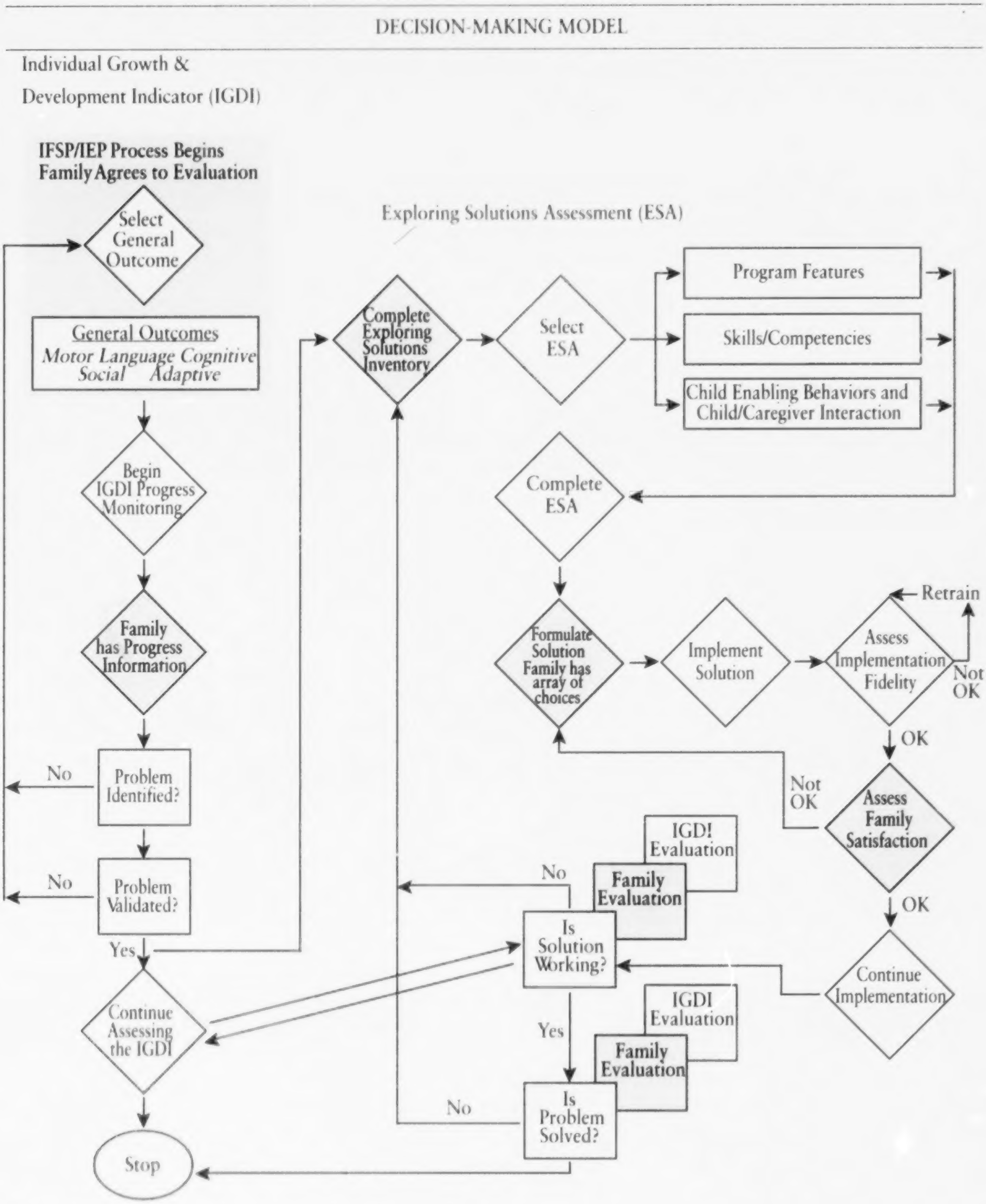
Case Study: Ray

To illustrate the applicability of the ECRI-MGD decision-making model, we offer the case of Ray. Ray is a 2-year-old boy attending Little Kids, Inc., a community childcare center. His teacher reported that his communication appeared immature and delayed for his age. This was a concern given that expressive communication is a general outcome of early childhood and plays a critical role in cognitive and social development (Acredolo & Goodwyn, 1988; Carpenter, Mastergeorge, & Coggins, 1983; Crais & Roberts, 1996).

While Ray used gestures and vocalizations to communicate with the teacher and his peers, he used only a few words regularly and did not put words together in sentences. The teacher talked with Ray's mother who observed these patterns of behavior at home. The teacher approached the early intervention team and requested an assessment and support services. As a member of this team, the school psychologist came to the center to meet with Ray's teacher and mother and to assess his needs.

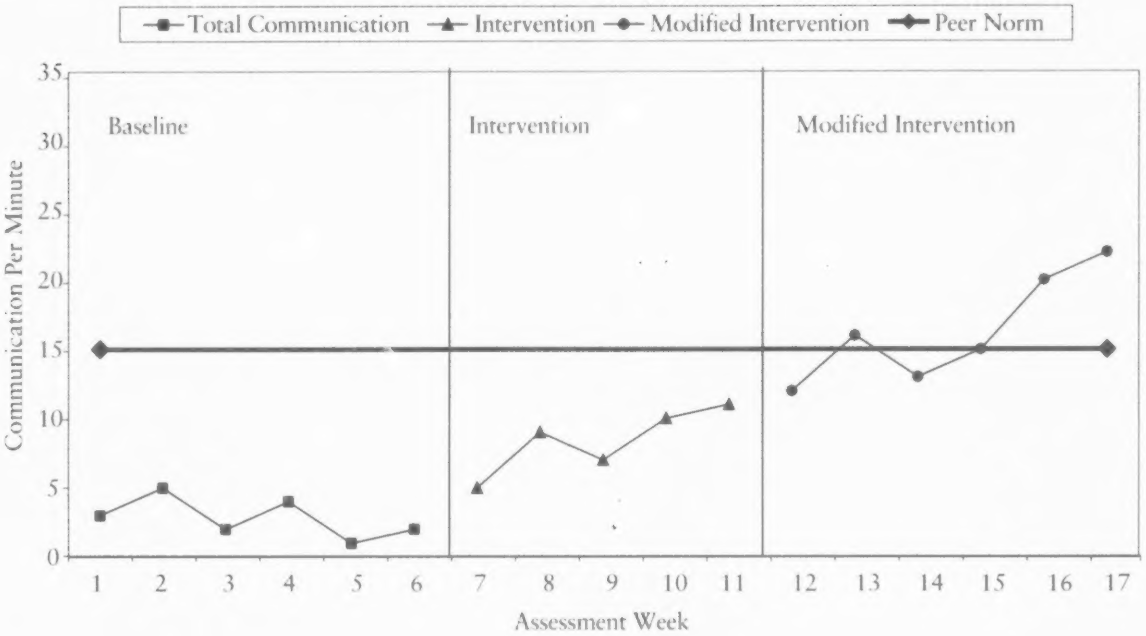
Because the concern was in the area of communication, the psychologist decided to assess the child's expressive communication by using an IGDI for communicative expression (Luze et al., 2000). This IGDI involved Ray and his teacher playing with a toy house and people for six minutes while the psychologist recorded the frequency of occurrence of key element skills (i.e., gestures, vocalizations, single words, and multiple word utterances) that have been identified in prior research as important indicators of a child's expressive communication (e.g., Acredolo & Goodwyn, 1988). These tallies were converted to rate per minute and graphed (see Figure 2). During the first assessment Ray produced only five communicative behaviors per minute, and all of these were prelin-

Figure 1. ECRI-MGD decision-making model


DECISION-MAKING MODEL
Individual Growth &
Development Indicator (IGDI)
IFSP/IEP Process Begins
Family Agrees to Evaluation
Select General Outcome
General Outcomes
Motor Language Cognitive
Social Adaptive
Begin IGDI Progress Monitoring
Family has Progress Information
No
Problem Identified?
No
Problem Validated?
Yes
Continue Assessing the IGDI
Stop
Exploring Solutions Assessment (ESA)
Complete Exploring Solutions Inventory
Select ESA
Program Features
Skills/Competencies
Child Enabling Behaviors and Child/Caregiver Interaction
Complete ESA
Formulate Solution Family has array of choices
Implement Solution
Assess Implementation Fidelity
Retrain
Not OK
OK
Not OK
Assess Family Satisfaction
OK
Continue Implementation
IGDI Evaluation
Family Evaluation
No
Is Solution Working?
Yes
IGDI Evaluation
Family Evaluation
No
Is Problem Solved?

Source: Early Childhood Research Institute on Measuring Growth & Development

Figure 2. Ray's expressive communication measure by using an IGDI



guistic in nature (i.e., gestures and utterances). Because the graph contained a benchmark mean level of 15 communication behaviors per minute (the average for similarly aged children) (Luze et al., 2000), it was clear that Ray's skills were below age-expectancy.

To provide a sense of Ray's rate for growth over time, the psychologist returned five more times in the next several weeks to gather five more assessments of communicative expression. These results documented that his level of communication was lower than his peers and provided an estimate of rate of growth. Furthermore, his results showed that his rate of total communication was actually a decreasing trend line (see Figure 2). The psychologist also gave a standardized language measure, the Preschool Language Scale (Zimmerman, Steiner, & Pond, 1992) to cross-validate information gathered from the IGDI. The standardized language test showed Ray's scores to be below the norm. These data were shared with Ray's mother and his teacher, and because they concurred with the IGDI assessment, the team decided to plan and implement an intervention designed to improve his expressive communication skills.

As part of their intervention planning, the team reviewed an inventory of clinical queries to determine what was already known about Ray's communication delay and what types of information they needed (see Table 2). Working together, they explored issues of possible medical concerns; previous interventions or assessment information; Ray's specific communication skills; the range of settings, activities, routines, and curricula that might prove important in influencing his communicative performance; possible behavior problems potentially interfering with Ray's communication; and potential persons and settings appropriate for inclusion in the intervention.

Completing and ruling out most of these potential concerns, the school psychologist decided to observe Ray in his childcare center, and to examine his communication skills as well as his opportunities to communicate there. She used the Program Features Checklist to determine how the center was organized and how it might be designed to influence Ray's communication. The Program Features Checklist is designed to examine the structural characteristics of the center (caregiver-child ratio, toys accessible), interactions with the caregiver (following the child's lead, asking questions, taking turns, missing opportunities to respond), use of discipline, classroom activities (use of daily creative play, daily reading time, encouraging social interaction, using pre-

Table 2. Clinical concerns guiding exploring solutions assessment decisions

- History with child
- Medical issues
- Family/caregiver concerns
- What child knows and can do
- Settings, activities, routines, curriculum
- Child/caregiver interaction
- Competing or interfering behaviors
- Barriers to intervention implementation
- Fidelity of implementation

dictable transitions), and toys and materials (encourage social and pretend play, exploration, music, and movement exploration). The results showed that Ray's teachers asked relatively few questions, responded infrequently when he used gestures to communicate, and did not provide him with comments or labels for his actions or the objects he used. These features are considered highly important for promoting language development (e.g., McCathren., Warren, & Yoder, 1996; McLean, 1990; Wetherby & Prizant, 1992).

An additional ESA was completed to provide more information about teacher-child interactions in the classroom. This measure, the Code for Interactive Recording of Caregiving and Learning Environments (CIRCLE) (Atwater, et al., 1993), is a behavioral assessment tool that provides information about the ecology of caregiving environments, the behavior of caregivers, and the child's engagement with people and objects within the setting using a time sampling procedure. Use of the CIRCLE indicated that most of the teacher's communication with Ray consisted of verbal instructions or talk directed at him as part of a large group of children. There were few interactions directed exclusively toward him. In addition, teachers did not appear to be expanding on his verbalizations, prompting him to use words, or engaging in much positive feedback. They seemed to miss many opportunities to facilitate his communication. These data also demonstrated that when Ray did communicate with teachers and peers, he used gestures and vocalizations.

Data from these two measures provided the necessary information to formulate a practical and potentially viable solution. The team reconvened, reviewed the information, and decided to implement an intervention with the goal of increasing Ray's imitation of vocalizations and single and multiple word utterances by requiring him to request preferred objects or activities. To meet the goals, the team decided on strategies obtained from a modified Milieu Language Training program (Alpert & Kaiser, 1992; Yoder et al., 1995). Teachers were encouraged to follow Ray's lead during interactions, ask more open-ended questions, expand on his utterances, and use a delay to encourage Ray to fill in the missing words (e.g., When singing a familiar song, pause and then let Ray complete the phrase). The team decided to implement the intervention during snack time. During other times, the teacher could still use the intervention activities, but these activities were targeted for full implementation of the strategies. In addition, the team considered it important to identify what specific steps of the intervention were being implemented consistently and which ones were not. As a result, data were collected about the frequency of use of the intervention strategies during the scheduled time to evaluate fidelity of implementation (Figure 3). This information would be helpful to determine what aspects of the intervention were having the most impact on the rate of growth in Ray's communication.

The intervention was implemented for 5 weeks and then evaluated. At that time, the team examined the IGDI data again and noted that Ray had made some progress (see Figure 2: Intervention), but not as much as had been anticipated to meet the target goal of 15 communications per minute. The Program Features Checklist was used again, and this time the data indicated that the teacher continued to miss opportunities to respond to Ray's communication. The teacher noted that she would try to look for those opportunities in the future and would extend the intervention strategies to Ray's snack and lunch times.

The modified intervention was implemented for another 6 weeks during which weekly progress measures were employed. At the end of the intervention period, the team re-examined the IGDI data and found that Ray had made acceptable progress toward the goal of 15 communications per minute; in fact, he had surpassed the goal (see Figure 2: Modified Intervention). CIRCLE data showed that the teacher was using more open-ended questions, and was providing more frequent comments and labels for Ray's actions and more statements of approval (Figure 4). The CIRCLE data also showed that Ray was using words

Figure 3. Fidelity of implementation information before and after implementing a modified milieu teaching childcare intervention

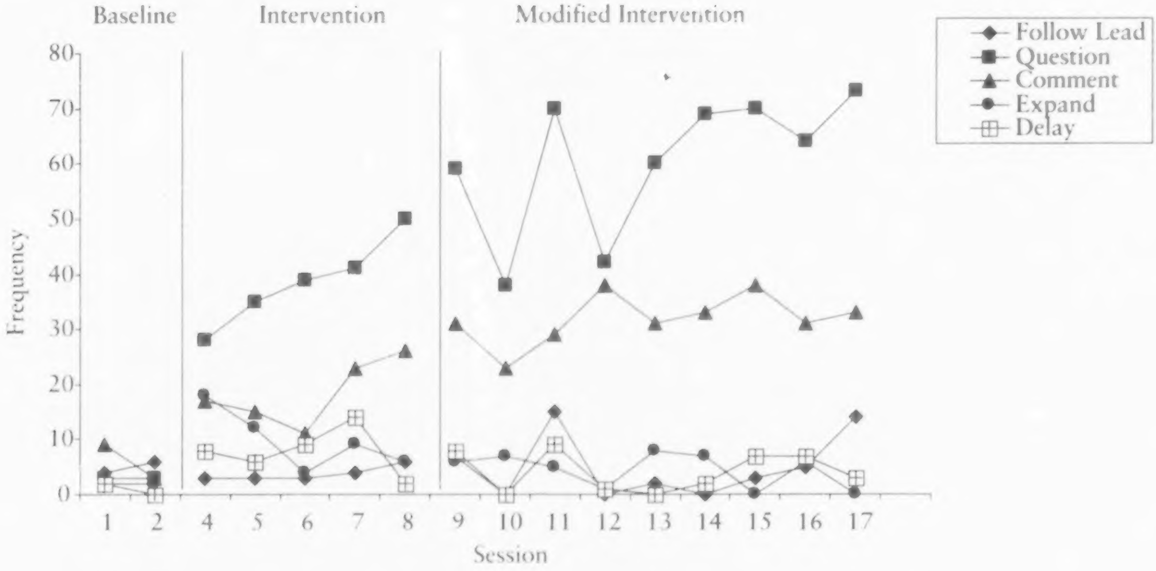
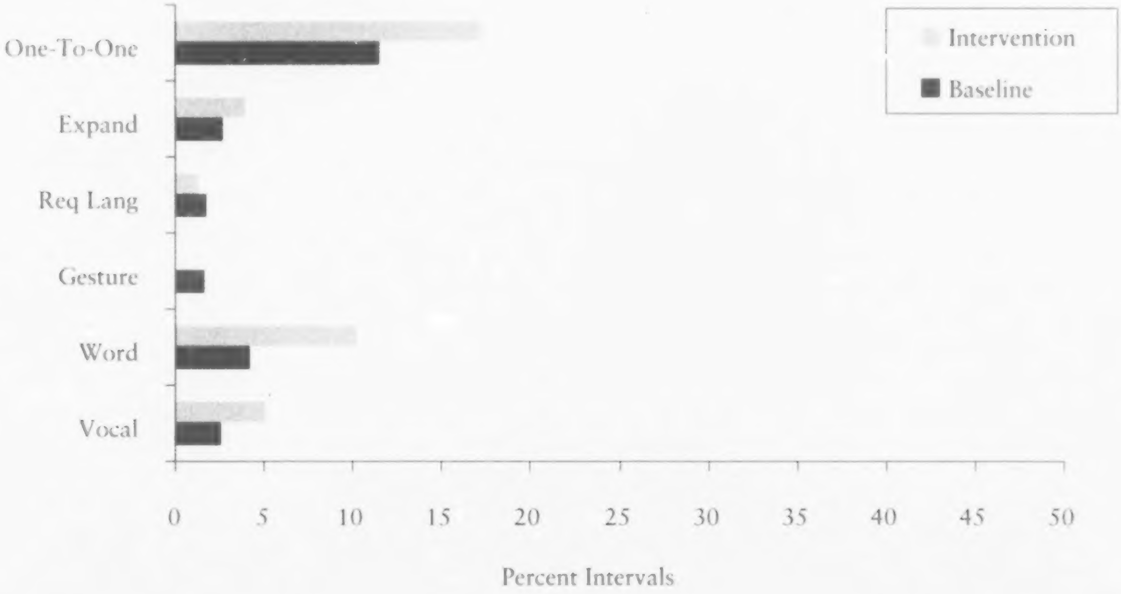


Figure 4. Direct observation of teacher-child interaction before and after implementing a modified milieu teaching childcare intervention



more frequently and using gestures less frequently. The Program Features Checklist data indicated that the teacher was asking more questions, and commenting more on his words and actions. Fidelity of implementation data showed that the teacher implemented more of the steps during the intervention phase compared to baseline, but implemented even more during the modified intervention phase (see Figure 3). The teacher reported that she felt comfortable continuing the intervention and the mother noticed an improvement in his communication at home. The team decided that the solution was working and wished to continue the intervention for an additional 6 weeks.

Illustrated in this case study is the entire decision-making model and the interplay between the separate IGDI and ESA data collection measures. By using a progress monitoring measure on a continual basis, the team was able to determine Ray's needs and when it was necessary to change the intervention. The ESA tools enabled the team to collect data that were directly relevant to the intervention while monitoring variables that could be changed. As a result, they were able to work much more efficiently and effectively than would have been possible with other assessment tools.

SUMMARY

School psychologists play an increasingly important role in the assessment of intervention results for infants and toddlers. Working across a wide range of disciplines, professionals, and settings that cater to the unique needs of this population, school psychologists can use more sensitive tools for identifying needs, implementing interventions, monitoring growth and progress, and adapting interventions for very young children. The background knowledge and skills needed to assess intervention results with this population go beyond that use of standardized testing associated with traditional psychometrics. Two sets of competencies are critical to meet this need: one, the use of observational and naturalistic methods for progress monitoring and problem solving; and two, detailed knowledge of the intervention strategies used to improve the outcomes of young children.

Working with a population of children who are often apprehensive about new people and novel situations requires familiarity and skill using assessment approaches that are highly consistent with the natural and typical experiences of early childhood. Methods for monitoring progress are needed that (a) overcome the difficulty of having younger children follow a predetermined protocol for long periods, (b) incorporate input from parents and caregivers in order to obtain a more complete picture of younger children's abilities, and (c) are capable of obtaining representative samples of children's abilities in a short amount of time.

Best practices in this area, like those of the ECRI-MGD, are currently focused on general outcome measurement approaches used in problem solving models because they facilitate improved communication with caregivers and parents, and are sensitive, efficient, and cost-effective. They also provide a common set of indicators for each general outcome, maintain an individualized focus on current skills and developmental functioning, and support the spirit of IFSP/IEP. Emphasis is on repeated measurement, monitoring rate of progress, and changing intervention when progress is less than expected. Because of their extensive experience and background with the use of progress monitoring and problem-solving models, school psychologists can play a critical role in developing, promoting, and using these approaches in early childhood. In conclusion, the ECRI-MGD decision-making model appears to be a highly useful approach for linking assessment with intervention for infants and toddlers in effective and desirable ways. The approach is consistent with current research, public policy, and DEC recommended practice.

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This chapter provides fundamental arguments for monitoring the development of individual children. After laying out the rationale for monitoring the progress, one occasion to the next, two approaches are compared: mastery monitoring versus general outcome measurement. These approaches can be highly structured, precise, and lead to improved outcomes and communication.

Luze, G. J., Linebarger, D. L., Greenwood, C. R., Carta, J. J., Walker, D., Leitschuh, C., & Atwater, J. B. (in press). Developing a general outcome measure of growth in the expressive communication of infants and toddlers. *School Psychology Review.*
This article reports the development/technical adequacy of two general outcome measures designed to measure children's growth in expressive communication for children birth to 36 months of age. Results of this longitudinal study of the first 9 months of life include indices of reliability, validity, and sensitivity to growth over time.

McLean, M., Bailey, D. B., & Wolery M. (1996). *Assessing infants and preschoolers with special needs.* Columbus, OH: Merrill.
This book provides a comprehensive discussion of current assessment practices for infants, toddlers, and preschoolers with special needs. In addition to description of practices, emphasis is placed on current practices in the field that are preferred. Just one of these is involvement of families and family-centered practice.

McConnell, S. R. (2000). Assessment in early intervention and early childhood special education: Building on the past to project into the future. *Topics in Early Childhood Special Education, 20*, 43–48.
This article discusses themes likely to mark early childhood special education into this century. Two are relevant to the assessment of infants: intensified attention to assessment of progress and growth of individuals and groups and linkage between assessment and intervention practices reducing the uncertainty about when and how to intervene.

Meisels, S. J. (1996). Charting the continuum of assessment and intervention. In S. J. Meisels & E. Fenichel (Eds.), *New visions for the developmental assessment of infants and young children*, (pp.27–52). Washington, DC: Zero to Three.
This chapter provides an overview of issues related to assessment and intervention with infants and toddlers. After describing different types of assessment and important developmental issues related to assessment, the relationship between assessment and intervention processes (different ways assessment can be tied with intervention) is further specified.

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Best Practices in Measuring Growth and Development for Preschool Children

Scott R. McConnell, Jeffrey S. Priest,
Shanna D. Davis, and Mary A. McEvoy
Early Childhood Research Institute on
Measuring Growth and Development
Center on Early Education and Development
University of Minnesota

OVERVIEW

This chapter describes Individual Growth and Development Indicators (IGDIs) for preschool-aged children. IGDIs are quick, efficient, and repeatable measures of correlates or components of developmental performance designed for use with children 30–66 months of age. Preschool IGDIs sample child performance in each major developmental domain (i.e., language, social, cognitive, motor, and adaptive), with a special emphasis on assessment related to long-term developmental outcomes that are common across the early childhood years, are functional, and are related to later competence in home, school, and community settings (Priest et al., in press). Preschool IGDIs are one of a growing class of general outcome measures (like curriculum-based measurement) for monitoring child development and achievement and for producing data that support an ongoing and comprehensive decision-making or problem-solving model of assessment and intervention (c.f., Deno, 1997).

The purpose of this chapter is to provide a broad overview of preschool IGDIs, including foundational information on their development and evaluation and practical information on their application both individually and as part of a decision-making model of assessment and intervention. Preschool IGDIs are still in a fairly early stage of research, development, and evaluation. Readers interested in monitoring recent work on these tools may want to consult http://ici2.umn.edu/ecri.

In the first section of this chapter we will describe how IGDIs can be seen as one part of a comprehensive early childhood education program, the ways in which they contribute to a decision-making approach to assessment and intervention, and the background information and skill needed to use them. In the section on "Best Practices," we will describe preschool IGDIs already developed and those currently under development, and provide some examples of application for these measures. Finally, in an annotated bibliography at the end of this chapter, we provide a few additional references for more information on general outcome measurement and preschool IGDIs.

Overview of IGDIs

As their name suggests, preschool IGDIs are *indicators* of child status in different developmental domains. As indicators, these measures are not considered comprehensive all-inclusive samples of child performance in a particular domain or area of functioning. Rather, these measures are meant to be simpler components or correlates of more comprehensive measures or samples of child performance on the terminal skill in a particular domain.

Preschool IGDIs are specifically designed to help teachers and parents *monitor developmental growth* of individual children over time. This focus on growth will help practitioners identify children needing early intervention, and monitor the effects of such intervention so that long-term outcomes can be improved. Additionally, we expect preschool IGDIs to be used for screening children in potential need of intervention, evaluating programs, and other applications (c.f., Shinn, 1998).

A summary of essential characteristics for individual growth and development indicators can be found in Table 1. Two basic principles underlie these essential characteristics. First and foremost, IGDIs must *represent performance in the presumed developmental domain and general outcome.* Technically, this means preschool IGDIs must demonstrate criterion or construct validity, treatment validity (or sensitivity to the effects of interventions targeting a particular developmental outcome), and social validity (evidence that information helps teachers and parents make decisions about a specific developmental outcome).

Second, preschool IGDIs must also *provide an index of the rate of development or growth over time.* Growth or change is a powerful metaphor for all educational programs, and is especially appropriate for evaluation in early childhood education. Through frequent and repeated assessment, and by using common measurement procedures and metrics, preschool IGDIs (like other general outcome measures) produce empirical "movies" of the rate of change in a particular domain over time. Parents and educational professionals with this information can evaluate the extent to which a child is on a developmental path to achieve desired outcomes at later ages (for instance, whether a preschool child is on trajectory to be an independent reader by the end of third grade).

As depicted in Figure 1, the growth trajectory produced by repeated administration of preschool IGDIs can be used to answer a number of different questions, such as (a) What is the child's current level of performance compared to a normative group of similar age? (b) What is the child's projected rate of growth and development, and on the basis of this information, does it appear likely the child will reach a desired long-term goal by the desired age or date? (c) What is the effect of intervention on the child's rate of growth and development, and does this particular intervention improve the child's chances of reaching the desired long-term goal?

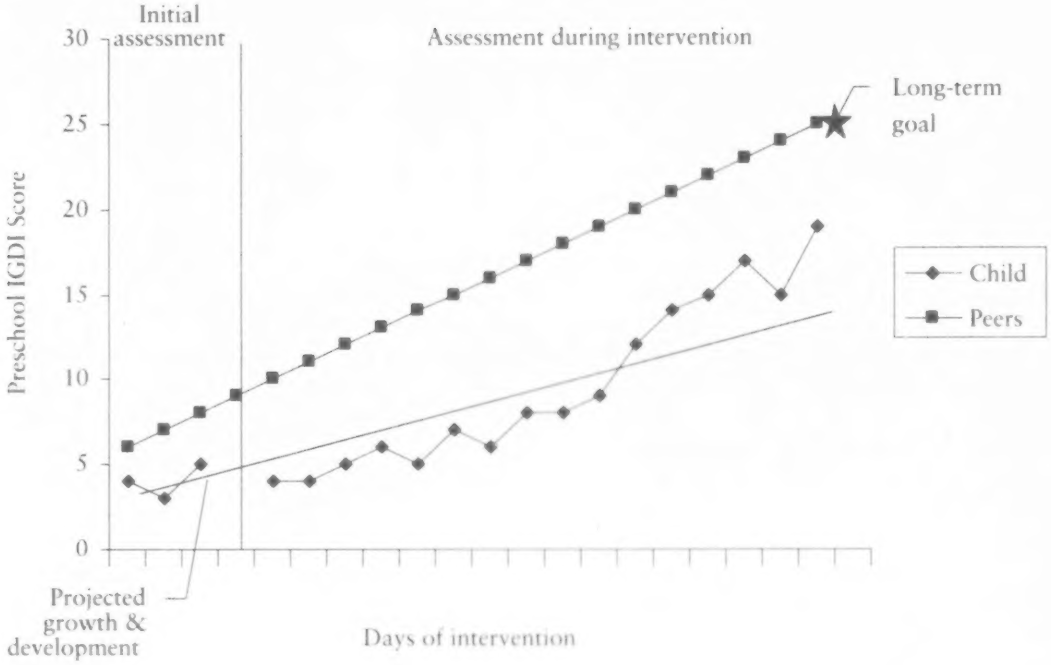
Guidelines for Use

Preschool IGDIs should be used in instances where psychologists, teachers, and other program staff want to measure, record, and act on information about young children's rates of growth and development toward long-term developmentally important goals. This assessment may be completed to monitor children not receiving specialized intervention, to identify children who might benefit from such intervention, and to monitor the effects of such intervention. Preschool IGDIs can be employed in regular early childhood programs with a stable cadre of enrolled students, or in community-based programs where children are seen more periodically by educational or other child service professionals. Further,

Table 1. Essential Characteristics of Individual Growth and Development Indicators

Characteristic	*Rationale*
Assess behaviors related to important outcomes for children	Construct and social validity; likelihood of implementation in range of settings
Efficient and economical administration and scoring	For ease of use, particularly with large samples in repeated fashion
Standardized and replicable procedures	Minimize error due to administration variations
Repeatable over time	Frequent, repeated assessment for monitoring rate of growth
Reliable across occasions, administrators, and stimulus materials	Reliability of assessment information
Sensitive to growth over time	Essential for assessment of developmental progress
Sensitive to the effects of intervention	Essential for monitoring effects of intervention

Figure 1. Sample preschool IGDI



given the standardized and easy-to-use features of these measures, data collection and management can be conducted by psychologists or others with advanced training in child assessment, as well as by teachers, paraprofessionals, volunteers, or others. (When paraprofessionals or volunteers conduct large portions of assessment, an overall plan and ongoing monitoring of assessment results and utilization should be monitored by a professional with more in-depth knowledge and experience.)

To date, preschool IGDIs have only been used experimentally in child-serving programs. We expect, however, that application will include a variety of purposes:

1. Screening and other normative comparisons of children in the general population, or those served in a program or classroom.
2. Identification of need for intervention (or change in intervention), and/or selection of individual children for intervention.
3. Evaluation of effects of intervention.
4. Program evaluation efforts.

In spite of their relative youth, IGDIs build on a strong conceptual and empirical foundation in the design, evaluation, and application of general outcome measures. As a result, by sticking closely to the models provided by earlier research and development (Deno, 1997; Shinn, 1998), we can offer in this chapter an early view of the possible benefits of these measures for preschool-aged children.

BASIC CONSIDERATIONS

Preschool IGDIs, like other general outcome measures, are intended to be both highly replicable and easy to use. Nonetheless, proper application and interpretation of IGDIs requires familiarity with *background information* (including information on assessment in early childhood education, general outcome measurement, and decision-making models). Additionally, skilled use of preschool IGDIs requires specific *background knowledge and skills*, including information on basic test administration, data management skills, and interpretation and treatment planning. These issues are addressed briefly in the following sections.

Background Information

ASSESSMENT IN EARLY CHILDHOOD EDUCATION

Assessment in early childhood education has a shorter history, and more diversity of opinion (and controversy) regarding its scope and appropriateness, than assessment for children in K–12 education. Nonetheless, there is a strong tradition of assessment in early childhood education, particularly for children with special needs (Fewell, 2000; McLean, Bailey, & Wolery, 1996).

Akin to practices for older children, assessment in early childhood education covers a number of different functions. Perhaps most common in early childhood education is *assessment for screening* to identify children who may need additional evaluation or early intervention. Universal preschool screening programs are common in many states, and a variety of checklists, tests, and systems have been developed to support these efforts. Additionally, in the past few decades increased attention has been paid to *assessment for determining eligibility*, especially for special education and related services. Again, a number of checklists, interviews, tests, and systems have been developed to support eligibility evaluations, often in direct response to state and federal laws governing special education.

Other assessment tools for young children have also emerged. Recently, a variety of systems have been developed for *planning intervention programs* (e.g., Barnett, Ehrhardt, Stollar, & Bauer, 1994; Bricker & Pretti-Frontczak, 1996). Generally, these assessment systems relate either to formal or informal developmental sequences, or to explicit curricula (Bricker & Waddell, 1996) for early childhood education.

Closely related, a small number of systems for *monitoring developmental progress and evaluating effects of intervention* have been offered in recent years. In select instances, these monitoring systems are tied directly to program planning and curriculum (as with Bricker's *Assessment and Evaluation Performance System*). In other instances, these systems are free-standing tools based on standard or generic developmental sequences (Meisels, Liaw, Dorfman, & Nelson, 1995). To date, however, most progress monitoring systems for young children represent "critical skills mastery" approaches, with some inherent weaknesses for monitoring progress and evaluating change (McConnell, 2000). In particular, these critical skills mastery approaches are often cumbersome to administer, provide little information for making comparative evaluations of individual children, and provide no information about rate of growth over time nor rate of progress toward long-term desired outcomes.

As we continue to refine assessment practices for young children and their families, several specific conceptual and social-political issues must be confronted. These issues include:

1. *Professionals and parents have a lack of clarity and agreement regarding the developmental goals, or "outcomes," for early childhood education.* Early childhood education has long been saddled with internal debates over the scope and direction of intervention (e.g., "readiness" versus "skills" goals, "child-directed" versus "adult-directed" intervention; cf. Carta, Schwartz, Atwater, & McConnell, 1991). At the same time, there is little conceptual clarity or empirical support for developmental outcomes that prepare children to meet the academic and behavioral standards of early elementary school. Without a clear sense of important functional and developmental outcomes for early childhood education, it will be difficult to develop a monitoring system that is widely accepted and implemented.

2. *There is an associated ambiguity about "curriculum" in early childhood education, and thus ambiguity about standards against which children should be evaluated.* Without agreement and empirical support for particular developmental outcomes, it is impossible to identify specific experiences and opportunities that promote young children's long-term success. And without this information, professionals in early childhood education have little external guidance about what services to provide at any stage of evaluation.

3. *Preschool children do not have universal access to educational services, thus reducing the number of children served in publicly funded programs.* While the United States may be moving toward some version of universal access to educational ser-

> vices for preschool-aged children, at the turn of the twenty-first century publicly funded programs are available primarily for children with developmental or other disabilities (served through special education), children living in poverty (served through Head Start and related programs), and children with other perceived special needs or risk factors. There has been tremendous growth in the numbers of children served in congregate care situations such as day care, but there is very little explicit, common, and systematic organization of these services in ways that would support expanded assessment activities.

As a result, any assessment system in early childhood education must address several challenges. First, these assessment systems must be based on explicit definitions of the outcomes of interest, and provide evidence of the construct and social validity of these outcomes (e.g. Priest et al., in press). Second, early education assessment systems must articulate linkages between items or constructs to both earlier and later development and functioning, especially in academic domains considered important for early school success (e.g., reading). Last, assessment systems in early childhood education must be developed, evaluated, and applied across a broad spectrum of children, including those with disabilities, those at risk for learning and behavior problems (including children whose primary language is not English), and those children who are developing typically.

GENERAL OUTCOME MEASUREMENT APPROACH

Two different approaches to assessment for monitoring progress are emerging in early childhood education, similar to what has occurred in elementary and secondary education (McConnell, 2000). These two approaches have been characterized as critical skill mastery approaches and general outcome measurement approaches (Deno, 1997; Fuchs & Deno, 1991).

Critical skills mastery has been the dominant approach to assessment in early childhood education to this point (McConnell, 2000). This approach is characterized by assessment of separate discrete skills that are assumed to be developmentally linked and ordered in a sequence or hierarchy. Critical skills mastery approaches can help practitioners evaluate a child's current developmental status, and can be a strong foundation for program planning assessments. However, these approaches are poorly suited to monitoring the rate of development over time, assessing a child's progress toward long-term goals, or assessing child performance in an integrated, comprehensive, and authentic way.

Conversely, general outcome measurement lends itself to direct assessment of growth and development over time. Instead of breaking skills down into pieces and gathering incomparable measures of these different pieces, general outcome measurement allows the practitioner to continually measure a student's progress over time. General outcome measurement is characterized by the use of standardized prescriptive procedures and long-term measurement that remains constant over time (Fuchs & Deno, 1991). Performance in a particular domain is measured with repeated and direct observations of performance, using common metrics and comparable stimulus materials. Slope of progress over time is used as an indicator of progress in the entire domain or curriculum. Increases or decreases in the slope over time indicate the developmental rate of learning new skills (Fuchs & Deno, 1991). Because general outcome measurement samples a broad domain, growth (or no growth) indicates that the student is or is not making progress toward a specified outcome. General outcome measurement lends itself to treatment or intervention monitoring because of the broad sampling across domains and the measurement of progress over time using slope.

As a result, general outcome measures provide direct assessment of child progress toward a long-term goal. Further, because common metrics are used across time, general outcome measures yield data that index both current level of development and (if administered repeatedly) rate of development. Also, because common measures are employed and tools are explicitly designed for repeated and frequent assessment, general outcome measures are a good match to the task of evaluating the effects of intervention over short periods.

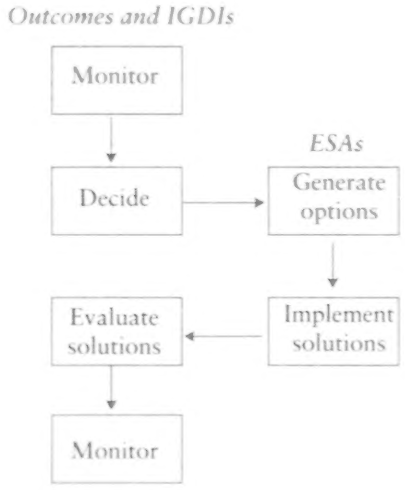
While a variety of critical skills mastery measurement systems have been available in early childhood education for some time (e.g., Bricker & Waddell, 1996; Meisels et al., 1995), general outcome measurement approaches are just beginning to appear (McConnell, 2000). Preschool IGDIs, along with similar measures for infants and toddlers and for early elementary students, and Dynamic Indicators of Basic Early Literacy Skills (Dibels (Good & Gruba, this volume), are examples of these recently-developed general outcome measures.

Decision-Making Model

Preschool IGDIs are part of a more comprehensive decision-making model for monitoring development and providing intervention to children from birth to age 8 (Early Childhood Research Institute on Measuring Growth and Development, 1998). This decision-making model, which is conceptually very similar to other problem-solving models in school psychology and special education (see Tilly, this volume), is designed to identify children in need of intervention, to plan that intervention explicitly, and to monitor the effects of intervention services over time. Figure 2 presents a simplified version of this decision-making model.

This model, like other versions, is *recursive*; that is, individual children typically cycle through different stages or portions of this model. Preschool IGDIs are used to monitor development over time. When performance on one or repeated assessments indicates that children are not making desired rates of progress toward a long-term goal, intervention is designed and implemented (the decision-making variation presented here anticipates future refinement of a new class of assessment tools, "exploring solutions assessments," to provide empirical support for, and reduce the uncertainty in, developing interventions for individual children). As intervention begins, IGDI assessment continues to document the effects of that change in service on the child's development toward the long-term goal. If intervention is successful, then monitoring continues. If intervention does not produce desired results, then the model recycles back to design, implementation, and evaluation of additional intervention.

Figure 2. A simplified version of this decision-making model



Background Knowledge and Skills

Test Administration

Because preschool IGDIs are specific and precise measures used to indicate progress, an understanding of basic test administration is needed. In particular, administrators of IGDIs must use constant and standardized procedures across children and test occasions. Specific skills include administering procedures in standardized ways, familiarity with administration and scoring procedures, adherence to testing protocols, following standard rules for interpreting and reporting results, and using pace, tempo, and structure to engage the child.

Data Management

While single administration of IGDIs may be useful in some instances, the full power of continuous progress monitoring comes through repeated administration of IGDIs to individual children over extended periods. To obtain the full benefit from this effort, teachers and school psychologists must have efficient and effective tools for storing, managing, and displaying their assessment data to support intervention decision making. Basic management of data consists of recording and graphing the number of correct responses over time (see Figure 1 for example). Time in days or weeks is recorded on the horizontal axis and correct number of responses is recorded on the vertical axis. Individual performance over time can be summarized, typically by calculating and graphing a trend line and interpreting this line based on pre-specified long-term criteria. (At the time this chapter was prepared, we did not yet have sufficient normative data to provide information for evaluating either initial status nor progress over time. Readers are encouraged to check http:www.ici2.umn.edu/ecri for more up-to-date information.)

These tasks can be accomplished with pencil and graph paper or a computer program such as Excel®. A number of professional resources describe procedures for continuous-progress monitoring (e.g., Shinn, 1989; Howell, Fox, & Morehead, 1997; or materials produced at the University of Oregon, Minneapolis (Minn. Public Schools, St. Croix River (Minn. Education District, or Heartland (Iowa) Area Education Agency.)

INTERPRETATION AND TREATMENT PLANNING

IGDI data collected over time and graphed can be used to answer questions about intervention need (e.g., *Is this child's development on path to meet our long-term goal?*) as well as treatment effectiveness (e.g., *Is my new intervention producing higher rates of growth for this child?*). To answer questions like these, IGDI users must be able to interpret current status and plan changes in treatment when needed.

Normative standards have been developed for some existing general outcome measures, most notably, curriculum-based measures of reading, mathematics, and written expression (Shinn, 1998). Normative datasets have been developed locally, assessing all children in classrooms or districts, and discussions have considered whether more general normative standards can be derived (Shinn, 1988). These normative standards provide one basis for evaluating both the status and developmental trajectory of individual children and groups and may prove helpful for users of preschool IGDIs. To date, however, few formal normative evaluations have been completed, and readers interested in nomothetic comparisons will need to develop local norms, following procedures described elsewhere for curriculum-based measures (c.f., Shinn, 1998).

Interpretation skills for general outcome measures have been described elsewhere (Deno, 1985; Shinn, 1989, 1998). In general, interpretation of IGDIs or other general outcome measures require comparing one child's current rate of development to either predicted long-term status (a "long-term goal") or to a desired rate of growth over time (an "aim line"). As in Figure 1, observed level and trend of child performance can be compared to a long-term goal or a continuous aim line, and teachers or parents can make judgments about whether the child's current rate of development is on-track, given both general and individual-specific goals.

While IGDIs are well-suited to monitoring and evaluating developmental status and treatment effectiveness, they provide little information for planning changes in treatment. Rather, interventionists and support professionals must turn to other data sources, including interviews and observations or curriculum-based assessment to achieve this aim (e.g., Barnett et al., 1994; Bricker & Pretti-Frontczak, 1996). Such "exploring solutions" assessments might detail critical behaviors and skills to be acquired (perhaps in a developmental or skills hierarchy), the naturally occurring or structured situations in which instructional opportunities might be embedded to teach these skills, and opportunities for both generalization programming and inclusion of the child in age-typical activities and settings.

BEST PRACTICES: INDIVIDUAL GROWTH AND DEVELOPMENT INDICATORS FOR PRESCHOOL CHILDREN

As part of the Early Childhood Research Institute on Measuring Growth and Development (see also Greenwood & Luze, this volume, and Good & Guba, this volume), we have been developing and evaluating a set of preschool IGDIs related directly to specific developmental and educational outcomes. In this section we describe specific procedures and evaluation results for IGDIs developed to date, as well as our plans for future development. We also provide an example of how IGDIs can be used in an early childhood education setting.

EXPRESSIVE LANGUAGE

Indicators of individual preschooler's growth of expressive language skills have been developed with the following outcome statement as a guide: *Child uses gestures, sounds, words, or sentences (including sign language and augmentative or alternative communication) to convey wants and needs or to express meaning to others.* Two indicators appear promising: (a) Picture Naming Fluency and (b) Semi-Structured Play.

Picture Naming. This preschool IGDI is completed by presentation of photographs and detailed color line drawings of objects commonly found in preschoolers' natural environments (i.e., home, classroom, community) one at a time for 1 minute. The measure of expressive meaning is the number of pictures identified correctly in 1 minute. Categories of objects used in this format include animals, food, people, household objects, games and sports materials, vehicles, tools, and clothing. Each photograph and line drawing is printed on an 8 x 5–inch index card. The examiner demonstrates the task with a set of four cards, looking at each card, naming the object as quickly as possible, and moving to the next card. The child practices the task with the same set of sample cards named by the examiner, ensuring the child understands the importance of speed in naming the pictures. The examiner then shuffles the entire deck of cards, presents the card at the top of the deck, and starts a stopwatch. Acceptable names for each object are printed on the back of each card to help the examiner determine the correctness of the child's labels. Incorrectly named pictures include errors and omissions. If the child does not respond to a picture within 3 seconds of its presentation, then the examiner asks the child, "Do you know what that is?" or "What's that?" If the child does not respond within an additional two seconds, then the examiner shows the next card. After exactly 1 minute has expired, the examiner stops the activity and counts the total number of pictures named correctly.

Studies of the psychometric properties of this measure—total number of pictures named correctly in 1 minute—have generated strong evidence for its use as an indicator of growth of preschoolers' expressive language skills. Results have shown strong concurrent relationships between this Picture Naming measure and norm-referenced measures of preschoolers' language skills, including the *Peabody Picture Vocabulary Test*, (3^{rd} ed.) (PPVT-III) (Dunn & Dunn, 1997) and the *Preschool Language Scale, 3* (PLS-3) (Zimmerman, Steiner, & Pond, 1992), with correlation coefficients ranging from $r = .47$ to $.69$ (Priest, Davis, McConnell, McEvoy, & Shinn, 1999). Picture Naming also appears sensitive to growth of preschoolers' expressive language skills over time, with significant correlations between children's scores and chronological age ($r = .41$ in a longitudinal study and $r = .60$ in a cross-sectional study), including typically developing children ($r = .63$), children enrolled in Head Start ($r = .32$) and children with disabilities receiving services in early childhood special education classrooms ($r = .48$). Additionally, Picture Naming is sensitive to growth across time ($b_1 = .34$, $p < .01$) and has 1-month alternate form reliability coefficients from $r = .44$ to $.78$. Picture Naming easily evokes expressive language from preschoolers, and it appears easy for examiners to learn and administer repeatedly across time.

Field testing of Picture Naming is currently underway in a large district in central Iowa and an urban district in Minnesota. These efforts have been undertaken to substantiate continued use of this indicator to track preschoolers' growth of their expressive language skills, as well as expand the normative pool of children to which the measure applies. Eventually this information will help create benchmarks for school psychologists and others to use to make decisions about individual children's growth trajectories and based on comparisons to norm groups.

Semi-Structured Play. In this format, two peers (typically the same age and sex) play in a setting away from others. Each pair is provided with a pre-selected set of materials that can be used in multiple, imaginative ways (e.g., Legos·, Duplos·, blocks, toy house, toy people). The examiner tells the children to work together to make something with the materials, walks away from the immediate area, and then starts a stopwatch. The examiner does not interact with children during the activity unless one child (or both children) leaves the area or adult intervention is needed to resolve a conflict. After exactly 10 minutes, the examiner stops the activity.

During the activity, the examiner observes one child's verbal behavior by using a 10-second partial-interval observational tool. This tool measures two child-produced behaviors per interval: an intelligible utterance of three or fewer words and an intelligible utterance of four or more words. Once the observer completes the 10-minute observation, the observer calculates two scores: the total number of intervals in which the child produced an utterance of three or fewer words and the total number of intervals in which the child produced an utterance of four or more words.

Research to date suggests that one of these measures—the total number of intervals in which the child produces an utterance of four or more words—is the best measure from this format for use as an indicator of preschoolers' growth in expressive language skills. Concurrent relationships between this measure and norm-referenced measures of preschoolers' language skills—the PPVT-III and PLS-3—appear moderate, with correlation coefficients ranging from $r = .33$ to $.43$ (Priest et al., 1999). However, this measure may not be sufficiently sensitive to growth over time, since correlations between the measure and chronological age range from $r = .25$ for children receiving early childhood special education services to $r = .29$ for typically developing children. One-month alternate form reliability coefficients for the observational measure range from $r = .25$ to $.79$. Learning to score this measure appears straightforward for most observers, based on strong results from tests of inter-observer reliability.

In summary, at least two measures—Picture Naming and an observational measure of four-or-more word utterances—show promise for assessing growth and development of expressive language for preschool-aged children. In particular, the Picture Naming measure shows promise as a logistically simple measure with strong psychometric properties.

EARLY LITERACY

We have begun development of preschool IGDIs specifically designed to assess preschool children's progress in early literacy development. While a broader set of measures will emerge in coming years, three formats have already been developed and evaluated that assess phonemic awareness and analysis of preschool-aged children. Phonemic awareness and analysis is widely seen as a critical element of early reading success (Adams, 1990; Snow, Burns, & Griffin, 1998), and there is clear evidence that development of these skills begins during the preschool years (Lonigan, Burgess, Anthony, & Barker, 1998; Whitehurst & Lonigan, 1998). These three formats assess alliteration, rhyming, and phonemic blending.

Alliteration. Our measure of alliteration was adapted from the work of Lonigan et al. (1998). We identified a set of words commonly known to preschool children, then assembled stimulus cards to present a color line drawing of the stimulus word (e.g., *boat*), and, under that, a row of three randomly ordered line-drawn pictures depicting the correct response (e.g., *butterfly*) and two incorrect responses (e.g., *lamp* and *chair*). During testing the administrator tells the child that the child will be asked to "look at some pictures and find the ones that start with the same sound." The administrator provides a series of sample items, both demonstrating the task and leading the child through it until the child understands the requirements.

Data collection continues for 2 minutes. For each card the examiner labels the stimulus picture and the three possible responses, then asks the child to "point to the one that starts with the same sound as [the stimulus word]." To assess alliteration, the number of correct responses in 2 minutes is counted.

While research continues on this measure, early analyses of psychometric characteristics are quite promising. Our first pilot test, with 38 preschool-aged children, yielded strong correlations to measures of language (with PPVT-III, $r = .57$) and early literacy, including Clay's *Concepts About Print* (Clay, 1977) ($r = .55$), letter identification ($r = .74$), and the *Test of Phonological Awareness* ($r = .75$). Early results also suggest this alliteration measure is sensitive to growth over time, and the number of words identified correctly in 2 minutes correlated significantly ($r = .61$) with children's chronological age. These analyses are being replicated and extended in a larger longitudinal study.

Rhyming. The Rhyming IGDI uses a format similar to the Alliteration measure, and was also adapted from work by Lonigan et al. (1998). Again, we identified a set of words commonly known to preschool children, but then identified rhymes for each of these words. We selected rhyming pairs where both words were likely to be known to preschool children, and assembled cards presenting a color line drawing of the stimulus word (e.g., *hat*) above a line of three randomly ordered pictures depicting the correct response (e.g., *cat*) and two incorrect responses (e.g., *house* and *shoe*).

During testing the examiner teaches the child what "rhyme" means ("Listen to these words: *bat*, *mat*, *hat*, *cat*. They all sound alike; they rhyme. *Cat* and *Sam* don't sound alike; they do not rhyme. Listen: *boy* and *toy* rhyme. Do *boy* and *car* rhyme? (no) Do *car* and *bar* rhyme? (yes)") then tells the child that the child will be asked to "look at some pictures and find the ones that sound alike. They rhyme." The examiner presents a series of demonstration and practice items, continuing until the child understands the task requirements. Data collection continues for 2 minutes. For each card the examiner labels the stimulus picture and the three possible responses, then asks the child to "point to the one that sounds the same as [stimulus picture]." To assess rhyming, the number of correct responses in 2 minutes is counted.

Our early research produced promising, but not quite as strong, evidence of the psychometric properties for this Rhyming measure. The Rhyming IGDI showed strong correlation to the PPVT-III ($r = .56$) and measures of early literacy, including Clay's *Concepts about Print* ($r = .54$), letter identification ($r = .59$), and the *Test of Phonological Awareness* ($r = .62$). Pilot testing also suggested a significant, but lower, relation to chronological age ($r = .44$), suggesting this measure might be somewhat sensitive to growth over time. Current research is extending these analyses.

Phoneme Blending. Phoneme Blending is assessed via oral presentation of stimulus words. A shuffled deck of stimulus cards is used to present a list of typically known words. Approximately one third of the items in this list require blending at the level of compound words (e.g., *cow – boy*), one third require blending at the level of syllables (e.g., *ta – ble*), and one third require blending at the level of phonemes (e.g., *r – a – m*). Order of presentation is randomized by shuffling the deck before each administration, so that each examination includes items of all three types, in roughly equal proportions.

The examiner reads previously specified segments, with one-half second pause between segments. The child is told "I'm going to say a word in a funny way and I want you to listen closely and tell me what word I said." Again, the child receives a series of demonstration and training items, and then administration begins. This measure of early literacy is expressed as the number of correct responses in 2 minutes.

Early results for Phoneme Blending, while promising, are not as strong or consistent as those for Alliteration or Rhyming measures. Phoneme Blending is related to performance on the PPVT-III ($r = .49$) and the early literacy measures (*Concepts about Print* ($r = .35$), letter identification ($r = .28$), and *Test of Phonological Awareness* ($r = .47$)), and significantly but weakly correlated with chronological age ($r = .30$). It is possible that this measure is too difficult for younger and less-skilled children, and as a result we have obtained floor effects. These issues, and replication of initial findings, are being examined in current research.

SOCIAL INTERACTION

Our work to date has also focused on measures of the development of social interaction skills. Specifically, we have developed indicators for the following outcome: *Child interacts with peers and adults, maintaining social interactions and participating socially in home, school, and community settings.* We are interested in assessing children's success in initiating social interaction with peers, responding to others' interactions, engaging in cooperative play, and knowing how to solve problems. These *key elements* of social interaction were selected based on a comprehensive review of the literature, as well as interviews with practitioners and researchers who had experience working with young children in play settings.

Two IGDI formats—Play Ideas and Joint Play—have been developed to serve as indicators of child-child interaction. For the first, Play Ideas Picture Prompts, the experimenter presents the child with a photo of the child's own playground or classroom. The picture includes areas of the classroom or playground that are typically used for free play. The experimenter asks the child to "pretend that you are going here with a friend." The child is then asked to name "all of the things that you and a friend could do together" in the area. For the second, Play Ideas Verbal Prompts, the experimenter tells the child that "a friend and I are going into your classroom (or playground) to play together." Again the child is asked to name as many things as possible that can be done together. With both the verbal and picture prompts, we count the total number of Play Ideas (number of novel activity ideas and number of novel interactive activity ideas) that a child generates during a 3-minute time period.

Joint Play is measured during a semi-structured play activity. This format includes the target child and one other child, typically of the same sex and comparable age. We have evaluated two different versions of this format. First, we present the children with "silly face" pieces (eyes, ears, nose, mouth, mustache, etc.) and a card with a blank face on it. We ask the children to "work together to make the blank face into a silly face." In a second version, we present the children with a puzzle form, and each child is given one-half of the puzzle pieces. We ask the children to play together to finish the puzzle. In each of the versions, children play for 5 minutes. We record the duration of joint play (defined as a child actively engaging in the same activity as a peer) during this 5-minute period.

Early results of our evaluations of these social interaction measures are promising. Duration of

Joint Play for one format (making silly faces) showed moderate correlations with observer ratings of social competence ($r = .40$) and teacher ranking of social interaction ($r = .43$). Additionally, duration of Joint Play in this format was strongly related to child age ($r = .58$), suggesting its sensitivity to growth over time. Correlations for the second Joint Play format, building puzzles, were generally lower and nonsignificant with all criterion measures ($r = .09$ to $.34$), suggesting that the settings in which these data are collected may influence the meaningfulness of scores.

Future research will evaluate the feasibility of using these IGDIs to assess developmental trajectories for young children with identified social interaction deficits, as well as those who may be at-risk for interaction delays. It is anticipated that these indicators will help teachers and families target children who may need additional assessment and possible intervention.

IGDIs UNDER DEVELOPMENT

Future efforts to develop new growth indicators will focus on preschoolers' skills in two domains: motor and adaptive. In the motor domain, the underlying outcome-guiding development of a growth indicator (or indicators) states: *Child moves in a fluent and coordinated manner to play and participate in home, school, and community settings.* Important elements of this outcome for preschoolers include development of locomotion skills, such as walking, running, and jumping, as well as object control skills, such as throwing, catching, and kicking (Burton & Miller, 1998). These elements will be used to formulate potential formats within which preschoolers' movement skills may be observed directly.

In the adaptive domain, the guiding outcome states: *Child engages in a range of basic self-help skills, including but not limited to skills in dressing, eating, toileting/hygiene, and safety/identification.* Factor analyses indicate this outcome represents one component of practical intelligence, which in turn embodies just one of perhaps five dimensions of adaptive skills (Thompson, McGrew, & Bruininks, 1999). For preschoolers, however, these self-care skills may play an even more important role in overall development of personal competence compared to older children, since the construct of adaptive behavior in early childhood appears less differentiated than it is for children beyond preschool (McGrew & Bruininks, 1990). Thus, these self-help skills will serve as essential elements of an indicator of preschoolers' growth in adaptive behavior.

Application Example: Monitoring Progress

Although preschool IGDIs are relatively new, our work to date has given us opportunities to use these measures in several community-based preschool programs. In one example, a school psychologist (the third author) and two classroom teachers implemented a continuous assessment program to monitor progress for children in three early childhood special education classrooms, with eventual focus on three particular children.

Wadsworth Community School is an hypothetical elementary school with a large Early Childhood Special Education program located in a large urban school district. Wadsworth serves 39 preschool children with disabilities in eight classroom sessions. Three classrooms, serving 15 children with developmental delays, participated in baseline data collection using Picture Naming IGDIs. Data were collected in the classrooms twice a week for 5 weeks.

These data were then used to identify individual children who might benefit from some change in their program of intervention. To select participants, the teachers and school psychologist identified children who had flat or decreasing slopes in Picture Naming scores across the 5-week period. Teachers also considered whether students demonstrated potential for growth in expressive communication through a combination of existing preskills, participation in intervention, and absence of competing behaviors.

From this process, the team identified three boys, ages 4-11 to 5-1, for more frequent monitoring and intervention evaluation. All three children were receiving speech and language and other special education services under the category of "Developmental Delay."

The school psychologist collected additional information to plan interventions (c.f., Barnett et al., 1994). Intervention planning data included language samples, information on classroom variables known to contribute to language development, and information on interactions between the boys and their teachers, peers, and classroom materials.

On the basis of assessment of classroom activities, child behaviors, and staff resources, the team designed a peer-mediated language intervention. The three target students were paired with typically developing peers in a structured play setting in 20-minute play groups three times per week. IGDI data were collected twice a week during the 2-month intervention phase to monitor changes in child growth and development. Weekly meetings were held with the two teachers to share data and discuss progress and/or changes.

The results of the progress monitoring can be seen in Figure 3. In two of the three cases, Alex and Ben, students responded positively to the change in intervention. Ben's rate of Picture Naming increased, both in level and slope, after the beginning of intervention; and this result is consistent with a change in developmental trajectory as a function of intervention. Similarly, Alex's rate of Picture Naming increased in slope, with intervention assessments more closely approximating the level demonstrated by typically developing peers. Conversely, Stuart's rate of Picture Naming after intervention showed little reliable change in slope or trend, and change in intervention toward the end of the school year produced little effect on his variable rate of Picture Naming.

Future Directions

In coming years we expect continued development of preschool IGDIs, as well as increased numbers of research studies and practical applications using preschool IGDIs to improve assessment and intervention outcomes for young children with disabilities and other risk factors. After initial development of IGDIs in all developmental domains, we project continued improvement and refinement of existing measures. Indeed, we expect the measures (and results) reported here to be only an initial baseline for the expected quality of these measures. We also hope that others will develop new measures for preschool children, meeting the criteria for general outcome measures outlined by Fuchs and Deno (1991) and summarized in Table 1. Also, we expect applications of preschool IGDIs to follow and replicate the path seen in the use of other general outcome measures, including curriculum-based measurement (c.f., Shinn, 1998).

Two elaborations of preschool IGDIs are already underway. First, our research team is developing *Get it, Got it, Go!, a* web-based application for helping teachers obtain assessment materials, manage resulting data, and collaborate with others on the design and evaluation of intervention programs. Second, we are actively exploring links between preschool IGDIs and general outcome measures in similar domains for infants and toddlers and for early elementary students.

GET IT, GOT IT, GO!

Our work, and that of our colleagues who have developed other general outcome measures, consistently points to the need for a technological infrastructure to support teachers' selection and implementation of these tools. To begin addressing this need, we are developing a multi-component web site for teachers, administrators, researchers, and parents.

The first part of this site, *Get it*, will provide information on the characteristics of general outcome measures, as well as detailed information on implementation in classrooms and programs. This portion of the site will also provide files for downloading and printing that provide both detailed administration instructions and stimulus materials (where needed) for individual preschool IGDIs.

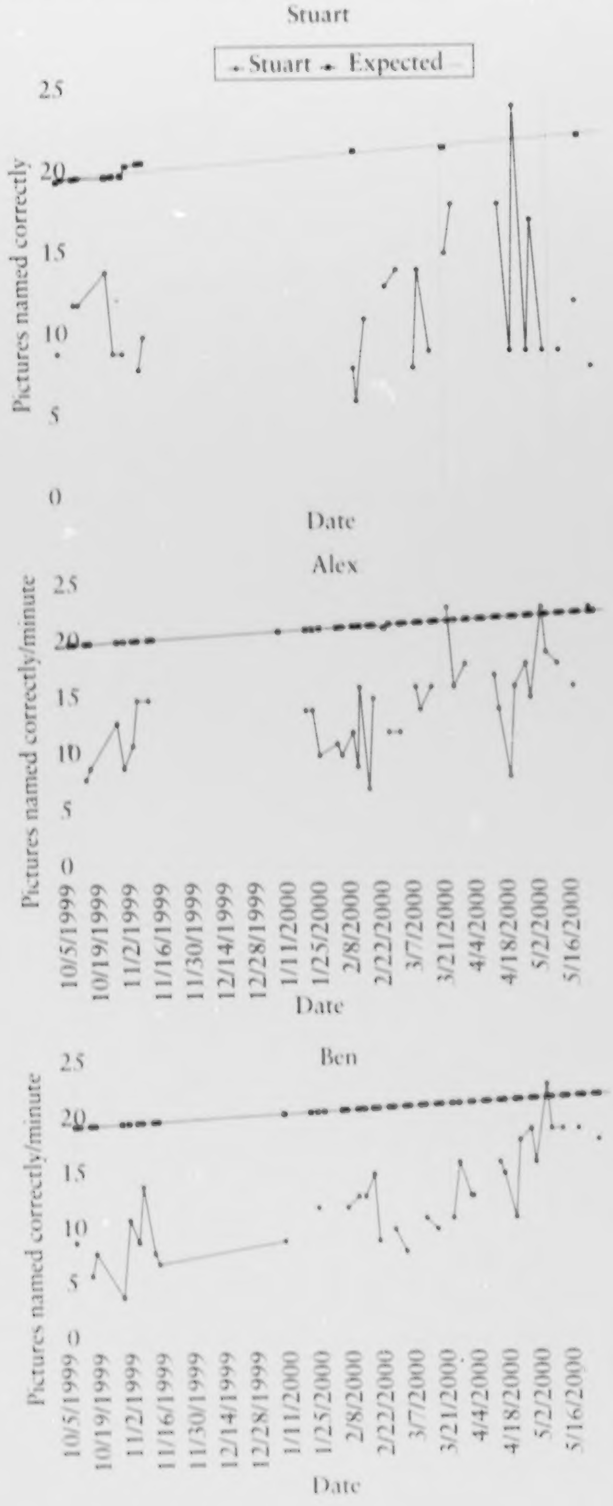
The second portion of this web site, *Got it*, will help teachers who have already begun using preschool IGDIs. The site will provide password-controlled access to a secure area where teachers can enter individual student data, produce reports of child status and/or growth over time, and compare individual results to groups in the teacher's classroom, district, or a national database.

The third portion of this web site, *Go!*, will support teachers interested in using preschool IGDI data to plan and evaluate changes in intervention. Teachers will "invite" others—including parents, colleagues, building and district consultants, or others—to a separate password-protected area where they will view data for a particular individual, and participate in a threaded discussion via email regarding interpretation, planning, and evaluating changes in intervention.

LINKS TO I-IGDIS, E-IGDIS, DIBELS

Preschool IGDIs are one part of an emerging portfolio of general outcome measures, linking outcomes and assessments from birth (see Greenwood & Luze, this volume) to kindergarten and early elementary school (see Good & Guba, this volume) and later grades (see Shinn et al., Fuchs et al., and others, this

Figure 3. Three case studies: using individual growths and development indicators to evaluate intervention



volume). To realize the potential of these measures *as a set*, our research is starting to examine relations between measures for different age groups (say, infants and toddlers compared to preschoolers), relations between *rates of growth* in one set and status on a second (say, relations between rates of growth in Early Literacy IGDIs and later reading), and relations between family and classroom variables and rates of growth within and across IGDIs and age periods. We expect results from this research to extend our understanding of assessment of developmental progress, and to advance our knowledge of the critical dimensions and outcomes of early intervention.

SUMMARY

School psychology researchers and practitioners are developing an expanding portfolio of *general outcome measures* for monitoring the growth and development of children from birth through secondary school. These measures are distinguished by administrative efficiency (they are cheap and easy to collect), psychometric quality (they possess high levels of inter-observer, alternate-forms, and test-retest reliability, as well as high levels of criterion, social, and treatment validity), and enhanced utility in school and community programs. In particular, these measures contribute to empirical evaluation of individual children's growth over time and the effects of different interventions. As such, general outcome measures are an essential component of many data-based decision-making (or "problem-solving") models of education and school psychology.

In this chapter we have described one part of this emerging portfolio of general outcome measures and individual growth and development indicators for preschool children. These preschool IGDIs sample child achievement and growth in developmentally and academically relevant domains, and hold particular promise for linking to similar general outcome measures for infants and toddlers and for elementary-aged students. To date, preschool IGDIs have been developed for expressive communication, early literacy, and social interaction. In the near future, similar measures will be available for adaptive behavior and gross motor functioning.

On the basis of our current knowledge of essential features and application opportunities for other general outcome measures (particularly curriculum-based measurement), we expect these preschool IGDIs to contribute to (a) improving procedures for identifying children with developmental delay, (b) monitoring development over time for individual preschoolers and groups of children, (c) implementing data-based decision-making models of intervention and evaluation for early childhood education programs, and (d) expanding research on developmental continuity in academic achievement, as well as the effects of different child, family, community, and service variables.

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This report presents the rationale and research and development process for creation of individual growth and development indicators for young children. It is especially for practitioners interested in more detailed evaluation of the quality and utility of IGDIs, and for researchers interested in developing measures of this type.

Early Childhood Research Institute on Measuring Growth and Development (1998). *Theoretical foundations of the Early Childhood Research Institute on Measuring Growth and Development: An early childhood problem-solving model* (Tech. Rep. No. 6). Minneapolis, MN: Center for Early Education and Development, University of Minnesota (available at http://ici2.umn.edu/ecri).

This report describes an early childhood problem-solving model for delivering services to children with disabilities or at-risk. Phases of this model include identifying the need for additional assessment based on a child's lack of growth toward developmental outcomes, validating need for early intervention, exploring possible solutions, evaluating implemented solutions, and monitoring child progress over time.

Fuchs, L. S., & Deno, S. L. (1991). Paradigmatic distinctions between instructionally relevant measurement models. *Exceptional Children, 57*, 488–500.

This article provides a critical conceptual distinction between "critical sub-skill mastery" and "general outcome measurement" approaches to monitoring progress in academic achievement, and outlines the paradigmatic distinctions associated with these two approaches. General outcome measurement is proposed as an approach to monitoring progress toward a single long-term goal, with periodic assessment using common metrics as a means of assessing an individual's progression toward mastery of this long-term goal.

Kaminski, R. A., & Good, R. H. (1996). Toward a technology for assessing basic early literacy skills. *School Psychology Review, 25*, 215–227.

This article describes a study investigating the validity, reliability, and sensitivity of three measures designed to assess three important aspects of early literacy: vocabulary, phonological awareness, and letter naming. The authors describe these measures as "Dynamic Indicators of Basic Early Literacy Skills," or DIBELS. DIBELS are designed to identify kindergarten and first grade students who have not acquired important prerequisites for reading.

AUTHOR NOTE

This research was funded by the U.S. Department of Education. Office of Special Education Programs, as part of the Early Childhood Research Institute on Measuring Growth and Development (Grant H024S600010). The authors thank the co-investigators of this project (Drs. Ruth Kaminski, Roland Good, Karen Rush, Judy Carta, Charles Greenwood, Gayle Luze, and Dale Walker) and our colleagues at the University of Minnesota site who have worked on the research reported here, including Kristen Davis Missal, Julie Good, Na'im Madyun, Stephanie McNeill, Chrisa Nitsiou, Maytali Novack, Allison Shiu, Jongho Shin, Ben Silberglitt, Marie Stadler, Michelle Suedbeck, and Sara Weisser Hall.

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Best Practices in Early Intervention

David W. Barnett
University of Cincinnati

OVERVIEW

This chapter describes the basics of intervention-based service delivery for young children who would be considered high risk: children who are difficult to parent, teach, or befriend. Behaviors of importance for intervention purposes are individually determined, but rather than based on controversial developmental testing (Macmann & Barnett, 1999), they evolve from an understanding of problem situations. Interventions typically include those that reduce challenges of parenting or teaching, improve developmental functioning, enhance peer or sibling relationships, and help lead to successful transitions to next environments. The analyses of behavior in educational contexts and needed interventions also can provide information for special services eligibility entitled by Federal Law (P.L. 105-17).

The *potential* benefits of early intervention are far reaching and impressive but they are not *givens*. The outcomes for children described as high risk have included relatively immediate gains in development and achievement, and long-term social advantages such as fewer bouts with social services and the law. However, the promising but uneven data result from relatively few experimental programs (Karoly et al., 1998) that may be difficult for communities to replicate. Educators may question how early intervention benefits may be realized through local school and team efforts. The answer is not easy, but in addition to experimental programs, suggestions may be generalized from intervention-based research and practice that has evolved from thousands of single case studies since the 1960s targeting the developmental and behavioral challenges of young children (Baer, Wolf, & Risley, 1968; Barnett, Bell, & Carey, 1999b).

Intervention-based service delivery is guided by problem solving, functional assessments, intervention design principles including positive behavioral support, and strong accountability methods. *Problem solving* describes a step-by-step collaborative process of problem identification and analysis, plan development, and plan evaluation. For some children, continued iterations of problem solving are needed to maintain and generalize adaptive behaviors. *Functional assessments* are based on (a) identifying skills necessary for adaptations to typical environments with increasing independence and on (b) hypothesizing and evaluating the reasons for maladaptive behaviors (e.g., crying may serve the communication function of obtaining attention *or* avoiding a situation) (O'Neill, Horner, Albin, Sprague, Storey, & Newton, 1997). As a guiding principle, naturalistic *intervention design* may be defined as identifying the least intrusive, most robust intervention that will accomplish the goals of change within a natural setting. *Positive behavioral support* is a set of procedures for making environmental changes to reduce the need for reactive interventions and to teach skills for successful adaptations to environments. The key idea is the remediation of deficient setting *contexts* (Carr, Horner, & Turnbull, 1999). *Strong accountability methods* include direct measures of (a) child outcomes, (b) the intervention as carried out, and (c) parent and teacher judgments about the worthiness of the goals, intervention methods, and outcomes.

Related guides for early intervention are inclusion and developmentally appropriate practices. *Inclusion* is a philosophical stance used to help make judgments about the soundness of decisions for placing children in educational programs based on criteria of normality of environments and activities. *Developmentally appropriate practices* require classroom environments that are safe, engaging, orderly, organized, that promote positive social relationships and independence, and that meet individual needs (Bredekamp & Copple, 1997).

Intervention-based service delivery for high-risk children is based on well-established procedures. In the context of problem solving, and through information revealed by functional assessments, targets for change are identified and measured, and interventions are designed, carried out, and evaluated. Intervention designs have natural as well as empirical support in that they are based on actual observations of behavior in context and on research.

BASIC CONSIDERATIONS

Problem Solving With Parents and Teachers

Rather than providing direct services to children, the early intervention consultant engages in problem solving with primary caregivers to develop effective, acceptable intervention strategies for use within natural settings. Other team members are added as needed (i.e., specialized professionals, persons to help achieve cross-cultural problem solving). Teaming goals are (a) the improvement of current problem situations through the development of effective interventions and support and (b) the prevention of future problems through the enhancement of the caregiver's and/or children's skills. Intervention strategies arising out of parent/teacher problem solving and teaming may be developed for the home, community, and school.

When guided by intervention design and a problem-solving model, those involved emphasize the identification of *problem situations*, not problem children. Problem situations are defined by barriers or behaviors that preclude the natural effective roles of parents, siblings, teachers, and peers in children's development. Because the focus is on problem situations, from the outset an expectation is that caregiver behaviors and setting characteristics, as well as the child's behaviors, are frequently the focal points in problem solving. Thus, the units of analyses are reciprocal interactions between child and caregiver behaviors, routines, and activities in natural settings.

Functional Assessments

Functional assessment and intervention components for early intervention settings (school, home, community) have been organized into procedural guidelines termed PASSKey, which stands for Planned Activity, Strategic Sampling, and Keystone variable. PASSKey is used to structure functional assessments and problem solving in early childhood settings. An overview of PASSKey is presented in Table 1. The end result of functional assessments using PASSKey procedures are collaboratively developed intervention *scripts* for resolving problem situations that are then tried out, refined, evaluated, and ultimately faded. The origins of the concepts, descriptions of techniques, as well as evidence for positive outcomes, are summarized in Barnett et al. (1997, 1999a, 1999c).

ACTIVITY ANALYSIS

At the core of functional assessment is the contextual analysis of behavior. Planned activities are socially valid ecological units identified and prioritized by care providers (i.e., dressing, transportation to school, shopping, learning activities, free play, etc.). Planned activities of parents and teachers serve as fundamental units of analysis for intervention purposes. Sometimes the entire day is of concern, but prioritized planned activities are still the building blocks of intervention design. There are four basic techniques useful for assessing planned activities and designing interventions.

1. Functional record reviews and developmental histories help teams examine the degree to which health and family issues may be contributing to the reason for referral. Examples of health issues include vision, hearing, medications, and early identified disabling conditions. Examples of family issues include stressors and continuity of care difficulties. While many factors are typically explored, the term "functional" is used to link features of the developmental/medical history to specific influences on important daily activities and routines.

Table 1. PASSKey Steps

- Planned activities in school, home, or community settings
  - Waking-day and problem-solving interviews are used to examine daily schedules important to family and classroom routines
  - Consider especially difficult activities to target *and* successful activities for intervention ideas
- Strategic sampling of child behaviors and activities
  - From planned activities, decide when to observe activities
  - Choose methods for observing and recording behavior (and other intervention variables)
  - Observe sufficiently to determine patterns of interactions
- Keystone behaviors (or variables) are individually determined
  - Safety related (i.e., running from adults)
  - Prerequisites for progress (i.e., communication)
  - Socialization and self-help
  - Behaviors to avoid rejection from adults and peers
  - Behaviors important to parents' and teachers' routines (e.g., compliance with requests)

Overview of PASSKey

- Scripts as intervention plans
  - Written or pictorial personalized and detailed guidelines
  - For providing instructions and managing behaviors
  - Based on natural caregiver-child interactions, research, or learning principles
  - Tried out and adjusted with assistance and support
- Accountability
  - Is the script or intervention plan being implemented as intended?
  - Is the script comfortable and feasible?
  - Are the targeted variables changing in the desired way?
  - What changes need to be made?

2. "Waking day" (and sleep) and problem-solving eco-behavioral interviews provide teams with a detailed description of behaviors across settings and problem situations for caregivers. In separate interview formats to cover the child's waking day, parents and teachers are asked to describe a child's typical day by focusing on planned activities, routines, and behavior from awakening to bedtime. The problem-solving interview is used for an in-depth analysis of problem situations from the waking-day results. Both are used to help select targeted keystone variables, problematic as well as effective planned activities and routines, and needed supports.

3. An observation system is planned to assess and monitor the child's behavior and contextual variables within activities (e.g., responses to specific activities; child-peer or child-adult interactions). Observation systems need to be practical and effective, but there are many possibilities depending on the activity and behavior of interest, including parent, teacher, and consultant observations, and various combinations. A multi-step process is often effective in developing appropriate observations for home, preschool, and community settings.
   - The results of waking-day and problem-solving interviews are used to help define behaviors, places, circumstances, times for observations, and potential intervention roles.
   - Narrative real-time observations are used to document target behaviors, interactions, situations, sequences of events, and possible naturalistic interventions based on contextual features of the observations. The observer records meaningful and complete units of behaviors in lines or sentences and records the clock time for each unit of behavior. Data collected from real-time observations can yield frequency and rate, duration, prevalence, and inter-response time. On successive lines, an observer might record the following series of events:

     11:12 *J* begins to play alone at water table.
     11:13 *J* is approached by another child.
     11:14 *J* leaves to go to blocks.
     11:15 *J* returns to the water table and pushes the other child away.
     11:16 *Miss B* says "clean-up time."
     11:16 *J* continues at water table.

- Decisions about other observation techniques are based on findings from interviews and real-time observations. Relatively high-rate behaviors or those related to parent-child or teacher-child interactions typically will benefit from consultant observation and perhaps from the use of a preschool observation code (e.g., Bramlett & Barnett, 1993). Low-rate behaviors (i.e., infrequent tantrums) usually require that parents or teachers serve as the primary observers. Hypotheses about possible variables that maintain behaviors may be studied through an A-B-C (antecedent-behavior-consequence) analysis. Observation techniques useful for preschool settings are described in more detail in Barnett et al. (1999c).

4. Curriculum-based assessment (CBA) enables ongoing observations of children's performance in preliteracy, communication, social, self-care, and other developmental areas and yields information needed to determine the conditions necessary for competent performance. For intervention decisions, a curriculum must have a wide range of functional, developmentally appropriate and sequenced tasks, ongoing measurement of progress, and suitable group and individualized teaching strategies. Teachers apply the "instructional hierarchy" in building skills, first focusing on accuracy, then fluency, generalization, and finally application/adaptation (Haring & Eaton, 1978). Instructional situations of children whose progress is of concern become the focus of problem-solving efforts.

STRATEGIC SAMPLING OF ACTIVITIES

A major consideration is how to sample behaviors within activities. Rarely can observations be continuous and complete. *Strategic sampling* refers to collaboratively derived plans to acquire sufficient data about significant planned activities (behavior in context) for intervention decisions. Carefully designed sampling plans are needed (a) to ensure the ecological and technical soundness of assessment and intervention decisions, including generalizations that may be made about behavior and intervention results and (b) to make observations efficient. Based on interviews with teachers or parents, planned activities within the period of interest are identified to create "pools" of potential observation times that are both important for intervention purposes and comparable. Next, sets of planned activities representing the same activity/time across days, or equivalent sets of planned activities (e.g., all large group instructional activities), are identified as potential periods for observation/analysis. From these potential observation times, observation sessions are planned. As an example, perhaps observations should cover morning activities for a child, but this may not be possible owing to the consultant's schedule that allows for brief visits to the classroom once a week. Observations by teachers may be used to supplement the consultant's observations, or, at the very least, the problem-solving team would address the representativeness of data and gaps in allowable inferences.

KEYSTONE VARIABLES

The defining characteristic of a *keystone variable* is selecting a relatively narrow target variable that has widespread positive consequences. Children are often described by a multitude of problem behaviors depending on the preferences of assessors. In contrast, keystone variables emerge from understanding problem situations. Keystone variables are those that, if changed, are likely to positively impact the largest set of other significant behaviors, perceptions, or problem environments to most efficiently provide long term resolution of problem situations. Thus, keystone variables lead to other beneficial child behaviors and other benefits for those with significant child-care responsibilities. While keystone variables are individually determined, examples common in many preschool classrooms and families include communication skills, social relationships, compliance with adult requests, and adaptation to routines.

BEST PRACTICES IN EARLY INTERVENTION

Planned activity analysis and strategic sampling lead to the measurement of keystone variables for change. Intervention scripts are developed to address keystone variables within planned activities. Single-case accountability designs are used to evaluate the interventions. The data from these designs also fit reform efforts in eligibility determination (discussed later).

Intervention Scripts

Naturalistic intervention design applies problem-solving steps toward identifying (in order of possibility or caregiver preference) (a) naturally occurring parent or teacher intervention strategies likely to be successful either as implemented or with minor changes developed through consultation and feedback, (b) research-based interventions adaptable to evident styles of parenting or teaching within a problem context and setting, or (c) other positive interventions that may be acceptable to parents and teachers as well as effective. From functional assessments, generalizations from intervention research, and brief intervention trials, scripts are developed with parents, teachers, and for children that detail intervention steps using the natural language and context of the problem situation. Scripts are personalized guidelines or prompts (written or pictorial) for providing instructions and/or managing behaviors to meet specified goals. Scripts are tried out and refined as necessary, and eventually lead to self-regulated behavior and are ultimately faded. Table 2 identifies major characteristics and advantages of scripts. Our research has shown that scripts are highly acceptable to parents and teachers, even scripts that may seem complex. Figure 1 gives an example of steps that may be scripted for effective requests. This type of intervention is often a component for improving compliance.

Table 2. Intervention scripts

- Scripts are used for describing significant instructional or problem situations in terms of characteristics of actual interactions. They may be highly specific (e.g., how to give effective requests) or more general (e.g., how to do incidental teaching), or class-wide.
- They may be used for identifying natural interactions and specifying their key components, and translating research-based interventions into natural and contextual steps.
- Scripts are used for teaching new behaviors or ways of responding to situations because they address skills or competencies ("how to do it") and self-efficacy ("I can do it").
- Scripts are easily shared across settings as needed; changes may be quickly made and shared.
- Scripts can create expectations for creativity, feedback, and coaching to try out new roles.
- Scripts may improve accountability and research in intervention design by creating more acceptable intervention plans through the script-building process, clarifying the intervention steps, and creating opportunities to note intervention adherence (intervention use "probes").
- The use of scripts may facilitate self-regulated behavior by fading script use as new behaviors are learned in problem situations.
- Scripts may enhance cross-cultural practice and ethnic validity since they are developed and written in everyday language of the care provider.
- Scripts are helpful in fulfilling the ethical requirements of informed consent because all of the relevant intervention components are described without jargon.

Figure 1. Script building example

Effective requests	*Steps observed*
• Get Sam's attention	
• Move close (3 feet)	
• Make eye contact, move to Sam's level.	
• Use short, simple words (e.g., "Come here," "Sit down," "Stop hitting")	
• Use gestures and visual cues (e.g., hands to show "Come here")	
• Thank child (e.g., "Thanks for keeping your feet to yourself")	
• Give frequent positive trials throughout the day (e.g., "It's your turn for art, let's practice what to do")	
• Give planned trials for less preferred activities (e.g., "It's time for clean up"; "You need to put the blocks away")	

Strong Accountability Methods

Evaluation is a continuous process that includes judgments of how reasonable the interventions are, whether they are being carried out as planned, and whether they actually lead to desired changes. The adequacy of intervention design is determined at the individual-case level, and data can be summed to characterize programmatic or agency efforts (Barnett et al., 1999a).

ACCEPTABILITY

Acceptability refers to judgments by caregivers regarding reasonableness: the appropriateness, fairness, intrusiveness, and normality of interventions. A purpose for evaluating acceptability is to anticipate and avoid rejection of an intervention and to consider information about variables that affect a parent's or teacher's use of an intervention (Schwartz & Baer, 1991). In the PASSKey model, acceptability is sampled throughout the intervention process.

INTERVENTION ADHERENCE: INTERPRETING PATTERNS OF SCRIPT USE

Treatment integrity is the degree to which an intervention is carried out as planned (Yeaton & Sechrest, 1981), but many parents and teachers have not found this term acceptable, and *intervention adherence* is used here instead. Factors affecting intervention adherence include (a) complexity, (b) time, (c) materials/resources, (d) number of persons, (e) perceived and actual effectiveness, (f) competition from other demands, and (g) motivation of change agents. Interventions that require substantial changes in the classroom or home ecology may require additional support.

Scripts are used as intervention adherence measures through direct observation and self-report, but the data need to be properly interpreted. Teams must distinguish between some natural variability in patterns of strong intervention use from difficulties in script use. Problems with intervention adherence without behavioral gains may indicate that the intervention is unreasonable for a situation and that reconsideration of the steps or redesign of the intervention are necessary, additional support needs to be provided, or motivation may be a problem. Intervention adherence with desired behavioral gains, but with missing intervention steps, may indicate that the intervention may be simplified.

Often, aspects of interventions may need to be redesigned to improve plan implementation. These barriers are approached through problem solving (i.e., adding practice steps to promote fluency with the intervention; noting the influence of antecedents, consequences, and setting events on the team member attempting to carry out intervention scripts). Other considerations include finding ways to make plans more acceptable without losing effectiveness, and recycling back through the problem-solving process, checking hypotheses, and possibly redoing a functional analysis. It is critical that problem-solving teams have supportive skills for working with team members who do not carry through with previously agreed upon plans in order to look more closely at barriers to intervention adherence. Alternatively, strong implementation of a script that is difficult to carry out without proper support, even with behavioral gains, may ultimately lead to burn out. In sum, teams need to closely consider intervention adherence patterns. The more complex and time consuming the intervention, the less likely that it will be implemented as intended. Conversely, naturalistic interventions may have greater intervention adherence because they are based on existing caregiver competencies.

SINGLE CASE "ACCOUNTABILITY" DESIGNS

Basic reasons for selecting single-case research designs are to compare the effects of alternative conditions and evaluate the effectiveness of interventions. These designs emphasize repeated, ongoing measurement of behavior and intervention use, and intervention modification based on data analysis. Data are presented graphically and analyzed visually to determine intervention effectiveness or the need for modification. The A-B design, a baseline followed by an intervention condition, is viewed as a cornerstone of accountability.

TEAM PROGRESS MONITORING

Much has been written about individual *child* progress monitoring. Described above, teams monitor the child's progress toward goals by using direct measures of performance, and data are organized by single-case accountability designs. Methods for team progress monitoring have evolved from PASSKey early intervention research. *Team* progress monitoring reveals how well teams are accomplishing their goals. Steps include building-level preparation, team

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composition and responsibilities, legal and ethical procedures, technical adequacy checks, and intervention planning and evaluation routines. Team *fluency* is a critical variable, mostly independent of child-related challenges, predictive of how much time problem solving "takes" (Barnett et al., 1997). Functional intervention-based service delivery steps are detailed in procedural guidelines available from the author.

Empirically Valid Intervention Design: Selecting Likely Interventions

Early intervention consultants are usually needed to help guide teams through a problem-solving process and to expand and help analyze the range of interventions that may be considered by a team. A fundamental question is, "Where do we get these intervention scripts?" Interventions are (a) generalized from developmental studies and intervention research, (b) founded on the realities of settings determined through problem analysis, and (c) based on the predicted success of the least-intrusive intervention likely to accomplish the goals of change. Developmental studies capitalize on the natural interactions of master teachers and successful parents, and these may be scripted as intervention exemplars (i.e., Hart & Risley, 1995).

Interventions are reviewed that have considerable validity support and that have frequently been applied to high-risk problem situations by our early intervention team members, but their use would need to evolve from the problem-solving steps. Antecedent interventions involving environmental restructuring and teaching have been less emphasized in the past but are highly promising in facilitating development and preventing problem behaviors (Luiselli & Cameron, 1998). Most practical interventions are "packages" or combinations of components (antecedents *and* consequences).

Some Intervention Basics

This section builds on interventions found in behavioral texts by describing fundamentals that have proven helpful in early intervention environments.

INTERESTING AND DEVELOPMENTALLY APPROPRIATE ENVIRONMENTS

One of the most powerful interventions in many preschool environments has been adding interesting activities and guides to their use, teaching children appropriate skills to access them, modifying activities as necessary, giving choices between activities, and rotating or limiting activities to maintain interest (Dunlap & Kern, 1996; Nordquist & Twardosz, 1990; Peters, 1995; Stollar, Dye-Collins, & Barnett, 1994). Peters (1995) found that social behaviors improved across *all* activities when a novel center was introduced and not only within the newly introduced activity.

SCANNING: A KEY OBSERVATION SKILL

Adults naturally monitor children's behavior in settings by periodically scanning or "seeing" what is occurring in activities. Effective scanning is often a key to problem analysis and many intervention designs. Scanning skills include (a) moving to strategic locations, (b) visually sweeping the room (Paine et al., 1983) or setting (car, store, playground), and (c) spot checking activities based on predictions from past behaviors or risk appraisals. Scanning is a *foundation* of intervention design because it sets the stage for altering antecedents (e.g., anticipating and guiding a child from an inappropriate act; giving choices) or providing consequences (e.g., attention). Interventions themselves may depend on *positive* scanning (such as noticing improvements in performance, looking for opportunities to provide attention) but *negative* scanning (ignoring positive behaviors while reprimanding disruptive behaviors or rule violations) may be commonplace in problem situations. Many intervention designs focus on altering *patterns* of scanning (e.g., reducing intensive monitoring by teaching self-regulated behaviors; increasing intensive monitoring in interventions for dangerous behaviors). Where aversives such as reprimands are overused, increasing positive scanning may be an effective intervention component (e.g., attending to three positives for every negative).

GUIDES, RULES (OR LIMITS), AND CONSEQUENCES

Guides, rules, and limits are essential for self-regulation as well as family and classroom management. The basic principle is that carefully selected, positively stated, learned, practiced, and enforced "guides" establish expectations for behavior. Paine et al. (1983) provided a thorough discussion about setting up classroom rules that we have frequently used and have adapted for many parent consultations.

FUNCTIONAL ANALYSIS

Functional analysis is used to test hypotheses about the control of behavior and behavioral change. Functional behavior-environment relationships are not necessarily revealed through observations of natural events (A-B-C analysis), and other procedures may be necessary to determine the function of behavior. Functional analyses are critically significant when problem behaviors may lead to aversive or more intrusive interventions (e.g., removing a child from a classroom due to behavior). The basics include (a) hypothesizing reasons for the inappropriate behavior (e.g., a child is interested in obtaining something like a toy, attention, or stimulation; or a child is interested in avoiding a situation such as a food item or activity); (b) teaching the child a more effective as well as efficient method to communicate (e.g., "Stop!" if another child tries to take a toy); or, if the function cannot be "honored," (c) introducing environmental changes or self-regulated coping behaviors, and requesting greater tolerance from teachers, other adults, and children (Reichle, McEvoy, Davis, Rogers, Feely, Johnston, & Wolff, 1996).

DIFFERENTIAL ATTENTION

Differential or systematic attention consists of approval contingent on desired behavior. It may be used to shape new behaviors and maintain or generalize behaviors. By definition, it is brief and may be non-intrusive. However, this intervention may be easily squandered or misapplied. Furthermore, studies show that appropriate behavior is frequently and inadvertently ignored and misbehavior actually may be rewarded. Thus, assessing caregivers' use of attention is often a necessary step for intervention design, a reason for the focus on scanning behavior (above). Assessment for differential attention may be conducted through an A-B-C analysis.

MODELING AND OPPORTUNITIES TO PRACTICE

According to Bandura (1986), most behavior is learned through modeling. Thus, modeling appropriate and adaptive behavior, and guiding, prompting, and reinforcing children to perform new or alternative behaviors, are basic intervention strategies. One of the most powerful interventions for preacademics or social behavior is simply increasing "opportunities to practice" skill attainment (Greenwood, Delquadri, & Hall, 1984). Two steps are necessary: (a) analyzing occasions for learning and practice and (b) increasing the chances for practice and feedback.

Sequential and Hierarchical Plans

Problem solving is a step-by-step process, and intervention decisions involve the same considerations. Components of strong interventions may include (a) sequential and hierarchical plans (the easiest, most natural, and promising interventions are tried first and they become progressively more intensive as necessary) (e.g., Harding, Wacker, Cooper, Millard, Jensen-Kovalan, 1994; Porterfield, Herbert-Jackson, & Risley, 1976), (b) the analysis of appropriate replacement behaviors for an inappropriate or disruptive behavior, (c) a plan for teaching and prompting the replacement behavior, (d) the development of increased opportunities for the child to practice new responses, (e) choices and positive contingencies for desirable behaviors (Peck et al., 1996), and (f) planned responses for inappropriate behavior that eliminate its reinforcement.

Examples of Interventions for Language and Literacy

Language and communication referrals are pervasive in early intervention settings. While specialized, several language interventions that fit the roles of parents, teachers, and school psychologists are reviewed.

MILIEU LANGUAGE INTERVENTIONS

Perhaps the best example of naturalistic intervention is incidental teaching in facilitating language development (Hart & Risley, 1982; Warren, 1992). *Incidental teaching* capitalizes on important exchanges between a child and caregiver in relatively unstructured settings rich in materials or activities. The adult, following the child's lead, focuses attention on the child's verbalizations and encourages elaboration. The power of incidental teaching results from the cumulative effects of numerous brief exchanges between child and caregiver (or siblings, peers).

The use of a brief natural time delay (e.g., 5 seconds) during natural routines when children need assistance or otherwise need to initiate communication has been found to help with the development of language. Halle, Baer, and Spradlin (1981) give an example: The caregiver holds a glass of juice, faces the child, and waits for the child's vocal initiation. Delay can be used with any natural or functional opportunities that occur on a regular basis such as gross motor play (putting hands on the toy car to be moved and waiting before moving it) or when the child needs help with a shoelace or button or with bathroom requests. If the child does not make a response or the response is incorrect, then the adult may model the behavior.

Tirapelle and Cipani (1991) described an intervention termed as *missing-item format* that employs both incidental teaching and brief time delays. Adults provide opportunities to practice and motivation to do so by removing a necessary item from a natural activity. For example, in a game-like fashion, the spoon or cereal may be briefly removed, giving the child an opportunity to make a functional request. Correct responses are prompted after an incorrect response or a delay of a few seconds.

In learning new skills, it is important to maximize the amount of early success. In *errorless teaching*, early teaching tasks are simplified through prompts that are gradually faded. More difficult tasks are introduced slowly based on prior successes. Errorless teaching stresses the control of antecedent teaching procedures to enable the child to perform with no (or few) errors. There are two basic types of procedures. One involves a system of teacher prompts to help children perform. A second (and more elaborate) procedure uses systematic modifications of instructional materials whereby the task is initially made easy and progressively becomes more difficult by fading prompts (Wolery, Bailey, & Sugai, 1988).

EARLY LITERACY

Reading to children is one of the best supported interventions for early literacy skills. A routine for parents *reading to children* (Taverne & Sheridan, 1995; see also Dale, Crain-Thoreson, Notari-Syverson, & Cole, 1996) includes (a) examining a storybook and pointing out its features (author, illustrator) and main parts, (b) labeling and discussing picture content, (c) reading aloud, and (d) pausing to question understanding of the material. Potential benefits include improved attending skills, relationships, and bedtime routines, as well as literacy and language gains.

Examples of Interventions for Challenging Behaviors

ANALYSIS OF AVERSIVES

Children referred for behavior or learning problems may be experiencing very negative environments. Reprimands (and more harsh forms of discipline) are frequently overused and ineffective, and thus may be a critical point of problem analysis. One of the additional benefits of consultation reducing the ineffective use of reprimands and harsh discipline, and introducing positive interventions, is to improve family or classroom environment.

HIGH PROBABILITY SEQUENCES

Inserting a brief rapid sequence (usually two to three) high-probability requests (likely to be complied with based on observations, i.e., 80% compliance), may be used to increase appropriate responding to a low-probability request (i.e., 50% compliance) when the low-probability request is given soon after reinforcing the high-probability requests (i.e., 5 seconds). As an example, a child may have left a play area without cleaning up. A sequence of requests might be "Come stand by me" and "Point to your picture" followed by "Please put the markers away on the shelf." This sequence may be more likely to lead to compliance than "Put the markers away on the shelf" alone (however, the specifics need to be varied). Numerous studies show effectiveness with many potential referral questions such as compliance and social behaviors and even young peers delivering the requests (Davis & Reichle, 1996).

TEACHING ALTERNATIVE RESPONSES AND FUNCTIONAL COMMUNICATION TRAINING

Differential reinforcement of alternative behavior means a more acceptable behavior is substituted for the maladaptive behavior and occurrences of the acceptable behavior are reinforced. A common example is play engagement as an alternative for unoccupied time. Alternative responses may need to be first taught and practiced. Carr and Durand (1985) argued that communication skills may offer significant possibilities as functional alternative skills for severe problem behaviors. They proposed a "communication hypothesis of child behavior problems" where behavior problems function as "nonverbal communication acts" (p. 124). Durand (1990) presents a detailed guide for professionals to assist with functional communication training (see also the earlier section on "functional analysis").

CHOICES

Choice making adds quality to interactions (Hart & Risley, 1995), and structured choice making fits the criteria of being a natural and research-based strategy to help manage or modify behavior. It is incorporated into intervention design in many ways: for reinforcement appraisal and goal setting and as a foundation of many other intervention strategies. Procedurally, it may mean that children have (limited) choices over objects or activities, such as when to take a break or get a drink. A thorough illustration of choice making with young children having multiple and severe problems is provided by Peck et al. (1996; see also the special issue on choice, *Journal of Applied Behavior Analysis, 30*(3), 1997).

TIMED POSITIVES, FIXED-TIME, OR NONCONTINGENT REINFORCEMENT (NCR)

This procedure has been in search of a name (Vollmer, 1999), but it has been sufficiently effective to become a "go to" procedure for severely aggressive and self-injurious behaviors in our settings. *NCR* (no longer the accepted name but commonly described in the literature this way) helps resolve the potential problems associated with differential reinforcement (continuous monitoring of behavior, potential side effects due to extinction, and possible low rates of reinforcement because of high rates of inappropriate behavior). The basics are simple. Studies show that when a functional reinforcer (one that is linked to behavioral maintenance) is administered noncontingently, a target response will be reduced. NCR consists of the following components (Marcus & Vollmer, 1996, pp. 43–44): (a) a functional analysis to determine potential reinforcers; (b) NCR, during which a fixed-time schedule determines when the individual will receive access to preferred reinforcers during the session, independent of occurrences of disruptive or adaptive behaviors; (c) extinction, during which the experimenter provides no programmed consequences contingent on the disruptive target behaviors; and (d) fading, in which the schedule of noncontingent reinforcement is gradually decreased from a dense (continuous) to a lean schedule (e.g., one per 5 minutes). A procedure may be added to reduce potential negative effects by omitting reinforcement if the targeted response (i.e., aggression) occurs during a preset interval (i.e., 10 seconds) prior to the scheduled time for reinforcement. We have simplified these procedures greatly, still with effectiveness, in line with teacher's realities and acceptability (e.g., fixed interval schedules of 5 minutes during prioritized activities and 10 minutes for other activities; NCR to more than 1 child).

CORRESPONDENCE TRAINING

In correspondence training, reinforcement is contingent on a child both agreeing to engage in a target response and then actually performing the desired behavior. It has considerable research support for many applications (Paniagua, 1999). The rationale for correspondence training is straightforward, and involves developing the relationship between "saying and doing." Language is a logical target for self-regulation efforts for several reasons: (a) relatively speaking, it may be a well-developed skill with a pattern that leads to some control over behavior; (b) it can be used readily across different environments; and (c) it may be used conveniently and requires little effort. Although the focus of correspondence training is on verbalizations used to mediate behaviors, the procedures have been used with language delayed or socially withdrawn children.

First, careful consideration must be given to the child's ability to perform the task and to criteria for reinforcement. Baseline information is used to set initial criteria, and level changes are introduced by changing the criteria in planned increments. Final goals are set by peer comparisons through the use of micronorms (Bell & Barnett, 1999). For example, before a play period, the caregiver asks the child, "What are you going to do in play today?" If the child responds with "I'm going to talk to the kids a lot," then the child is sent to play. The criterion for "talking a lot" is set with baseline performance in mind. If the child does not spontaneously respond, then the caregiver prompts the child until the child verbally responds that he or she is ready to play. After the play period, the child is taken aside and given feedback about the play session. If the child "talked a lot," then the child is given positive attention (i.e., a reinforcer). The results of studies suggest the importance of prompts, reinforcement of appropriate behavior, and rule-governed behavior. For some children, learning rules through language use and correspondence training may be quite beneficial.

DIFFERENTIAL REINFORCEMENT OF DIMINISHING (DRD) RATES OF BEHAVIOR

This tactic means that reinforcement is contingent on a preplanned reduction in response rate (Sulzer-Azaroff & Mayer, 1991). Two examples should make it clear why this contingency arrangement may be valuable. A mother may be concerned with excessive yelling or her use of intense reprimands that occur with very high frequency. She may "self-reward" at the end of the planned activity (or day) if self-monitoring demonstrates that 17 "yells" were recorded, down from 18 the day before. As another example, a child may show 10 "complaints" in play with other children; a decrease to 9 "complaints" is reinforceable during the next play period. Thus, on subsequent days, the mother and child in the examples would have to beat the prior days' accomplishments to be reinforced. DRD may be used for eliminating behaviors or reducing behaviors to suitably low levels. As with other differential reinforcement strategies, an important condition is that appropriate alternative behaviors need to be in the person's repertoire or must be taught. (An opposite strategy may be used for increasing desirable behaviors.)

GRANDMA'S LAW REVISITED (PREMACK PRINCIPLE)

High-frequency behaviors (playing with favorite toys) are made contingent on low-frequency behaviors (completing a pre-academic task). Although it has a wicked sounding title, the *response deprivation hypothesis* is a more general statement of Grandma's Law and has many possibilities for reinforcer assessment: Almost any behavior in which children naturally engage may be a potentially effective reinforcer "providing access to that response can be restricted" (Sulzer-Aazaroff & Mayer, 1991, p. 160). In fact, a low-probability behavior can function as a reinforcer for a high-probability behavior if there are restrictions placed on responses as assessed at baseline levels. Stollar, Dye-Collins, and Barnett (1994) reduced the inappropriately high activity levels of two children by placing some very mild and temporary restrictions (and time limits) on free play.

INTERVENTION "PACKAGES" FOR CHALLENGING CHILDREN

The term "package" in this context applies to a multicomponent intervention with strong evidence for wide applicability. Many children have been referred to us for behaviors typically described as conduct disordered. Earlier, we described work by Durand (1990) that falls under this category. Another intervention "package" is provided by Barkley (1997). Sanders and Dadds (1993) also provide a comprehensive model for parent consultation.

Social skills are often targeted for intervention purposes. A "Buddy Skills" program to help develop friendship patterns is another example of an intervention package (English, Shafer, Goldstein, & Kaczmarek, 1997).

In Figure 2, a menu of possible intervention components and scripts for a class wide intervention "package" are shown. We have had numerous referrals for disruptive behaviors in classes where groups of children (e.g., three to five) and entire days were of concern. Through collaboration, problem solving, and functional assessments, the key ideas are generally *adding "positives"* to the classroom and planning *routine sequences*, hierarchically arranged from least to most intrusive and demanding, to help with individual or group disruptions. Steps are used only as necessarily in a sequenced and hierarchical plan (also known as a consequence hierarchy) (Harding et al., 1994). We have found rapid improvements for class wide interventions with infrequent use of more demanding steps.

Using Intervention Data for Eligibility Decisions and Individualized Educational Programs

Problem solving is used to avoid unnecessary labeling. If necessary, the problem-solving approach described above can be used for analyzing developmental delays and making eligibility and Individualized Educational Programs (IEP) decisions. The data from intervention-based assessment and intervention may yield defensible and educationally useful *functional* discrepancies in performance and needed interventions.

These functional discrepancies that describe developmental delays are derived from applying appropriate measurement tactics (child *in* environment) and technical adequacy checks (Macmann & Barnett, 1999), and examining differences in the instructional,

Figure 2. Class-wide plan: Scripting interventions for disruptive behaviors

Observed

- **Adding Positives**
  - **Positive scanning**: effective movement; scanning, guiding, prompting, and using positive (versus misplaced) attention
  - **Increasing opportunities to practice**: direct teaching of expected behaviors; becoming fluent with rules and expected behaviors; peer "buddy systems" for social learning objectives
  - **High interest activities**: teaching expected behaviors in activities and transitions; setting time limits to sustain interest and promote rule learning leading to self-regulated behavior
  - **Functional communication training**: teaching children to solicit appropriate attention or request assistance
  - **Timed positives**: providing brief social/activity rewards regardless of behavior (surprise box, mystery rewards, brief activities) based on timer set for brief intervals
  - **Additional support for teacher**
- **Building routine sequences and consequence hierarchies**
  - **Prompts, redirection, simple correction**
  - **Clear requests; choices** (to reduce power struggles); **high probability sequences:** (i.e., "Come here," "Stand by me," "Point to something red you're wearing," "Put the blocks away")
  - **Limit warnings, repeat requests; limit activity times** (to maintain interest)
  - **Sit and watch** (contingent observation)
  - **Other safeguards** (for crisis/dangerous situations)

environmental, or related classroom strategies that are required to meet children's needs (Hardman, McDonnell, & Welch, 1997). On the basis of a review of intervention research, the following measurement tactics, singly or in various combinations, may serve as important targets for observations as well as service delivery, eligibility, and IEP determination: (a) teacher monitoring (amount of time required in proximity, rates of "teacher contacts" or supervision, and quality of interaction); (b) activity engagement (participation in classroom activities); (c) levels of assistance (prompting strategies facilitating learning or adapting to routines); (d) trials to criterion (rate of progress measured by learning trials or practice time); (e) behavioral fluency (differences in accuracy and rate of specific skills); (f) modifying activities (activities or instruction that involve unique or more complex interventions); and (g) curricular adaptations (domains, skill sequences, or instructional techniques that need to be modified) (Barnett et al., 1999b). Many of the techniques are used in conjunction with peer micronorms (Bell & Barnett, 1999).

"Eligibility" decision making is based both on (a) a discrepancy between educational performance in a critical or significant curriculum area of the referred child in comparison to expectancies for the performance of a typical child *and* (b) a desired change in performance that is resistant to planned intervention efforts that are naturally sustainable within the educational service unit. At least three patterns or combinations of patterns derived from direct measurement of "intensity of the need for special support" are used for making decisions (Hardman et al., 1997, p. 64): (a) an intervention may be successful but requires extraordinary effort to be sustained; (b) an intervention may need to be in place extensively or throughout the school day for appropriate inclusion; or (c) interventions carried out by a teacher may be unsuccessful, requiring replanning and special resources to be added to a situation. The performance discrepancy and actual intervention data are used to clarify the special education services or supports needed for a teacher and child in order to meet the needs of the child in the present environment or to establish needed environmental modifications to do so. The data may be used for individual as well as agency progress monitoring (Barnett et al., 1999a).

In summary, rather than a "categorical child label," the stress is on *legally, ethically, and technically defensible data sets* for eligibility decisions based on behavior in context. Singly, or in combinations, the above tactics may be aligned with children's needs expressed as categories used in federal law and by states for eligibility decisions (i.e., child with a disability or traditional categories).

Caution and Encouragement

The early intervention procedures outlined here require hard work, creativity, and a high level of professional preparation, perhaps learning the language of interventions, but the efforts are worth it. Positive outcomes for children may be documented. Capacity building of agencies and schools in providing effective learning environments reduces the need for intensive individualized intervention efforts.

SUMMARY

The many controversies and intractable problems surrounding "testing" for developmental delays and programming based on test results are reasons for emphasizing functional intervention-based service delivery. Intervention-based service delivery meets the intent of the IDEA amendments (P.L.105-17) in bringing proven intervention practices to educational services that will improve outcomes and reduce the need for children's labels. This premise has received a great deal of attention. The data sets produced by intervention-based services for individual children may be used for inclusionary efforts, special services delivery determination, and IEPs. The data is encouraging, but the work is challenging with capacity building and team fluency in problem solving techniques representing the most important variables.

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This book provides a brief (43 pages with large print), inexpensive, and easy to read description of positive behavioral support that can be widely used in early intervention programs. Included are assumptions and characteristics of positive behavioral support written to be understood by a general audience. Similarly, the basics of hypotheses development for problem behavior and functional assessments are clearly and succinctly communicated. Last, a check for support plans is provided. The book would be highly suitable for pre-service preparation and staff development.

Barnett, D. W., Bell, S. H., & Carey, K. T. (1999b). *Early interventions: A practitioner's guide* (2nd ed.). New York: Guilford.

This book provides a comprehensive source for early intervention concepts, functional assessments, and empirical intervention methods for home and school settings. It also suggests practical legal, accountability, and technical adequacy checks, and concepts and measures for meaningful eligibility determination. The foundations are based on eco-behavioral analysis, intervention research, and positive behavioral support.

Hart, B. & Risley, T. R. (1995). *Meaningful differences in the everyday experiences of young children.* Baltimore: Brookes.

This book is a must read for early intervention personnel by providing critical insight into environments and

the potential for environmental interventions, however daunting. It describes the results of a recent study by two pioneers in early intervention. Measures include not only children's language growth, but what happens in families (or doesn't!) to promote language as a keystone for later school and social success.

Karoly, L. A., Greenwood, P. W., Everingham, S. S., Hoube', J., Kilburn, M. R., Rydell, C. P., Sanders, M., & Chiesa, J. (1998). *Investing in our children: What we know and don't know about the costs and benefits of early childhood interventions.* Santa Monica, CA: Rand. This book packs much in 159 pages. It includes a succinct summary of major early intervention programs and benefits. The historical review, descriptions of key programs, and especially, program analyses are critical reading for early intervention specialists.

AUTHOR NOTES

Appreciation is greatly felt toward the following individuals who provided feedback to an earlier draft: Steve Coyne (special education preschool teacher), Misty Cresap (preschool teacher and parent), Rachel Dennison (special education preschool teacher), Mary Eaton (kindergarten teacher), Jodi Esterline (school psychology student), Sue Fan Foo (teacher of the deaf), Melanie Horvath (school psychology student), Maggie Jones-Prendergast (early intervention teacher and parent), Tom Knestrict (teacher, doctoral student), Jennifer Morris (school psychology student), Beth Myers (preschool teacher, schoolbus driver), Michelle Struckman (school psychology student), Christina Wronkiewicz (school psychology student).

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Best Practices in the Use of Play for Assessment and Intervention with Young Children

Roslyn P. Ross
Queens College and the Graduate Center of the City University of New York

OVERVIEW

Preschoolers Do Surgery

This is a story from the field as told to me by Dr. Kirschenbaum, a urologist and the father of 4½ year old Benjy. Benjy's teacher, Ms. Hardin, invited Dr. K to the preschool to explain what he did, an invitation she extended to all parents. Dr. K went because he wanted to please Benjy and participate in his program, but he also had a message to deliver to the children that doctors would help them if they needed an operation and put them to sleep so it would not hurt. "I gave them a little spiel about what I do and why. I just told them a story that a little girl's kidneys failed and her mother decided to give her her own kidney. So I took the kidney from mom and everybody was happy. I told them what the kidney does, that we all have two and that you can live with one. I drew a diagram and showed them how it cleans the blood of all waste products. I also told them when we were in the operating room, we had to put on special gowns and clean our hands and how I work with a whole team—doctors, nurses, an anesthesiologist."

The action then switched to a corner of the room where Ms. Hardin had set up miniature operating and recovery rooms. There were tables, baby dolls of different colors, surgical gowns, masks, gloves, and (improvised) hats. There were three operating tables and Dr. K appointed an anesthesiologist, a nurse, and a surgeon to work at each of the tables. Since there were 20 children, each child took turns, and the teacher supervised the proceedings. Dr. K reported being very busy going from one table to another "to make sure they didn't kill someone." To get his message across, he kept saying things like "Make sure you put the patient to sleep so there is no pain." "We'll make it better." "We'll remove whatever we have to." "We'll give medication that makes it O.K."

Despite Dr. K's focus on enacting successful pain-free operations, other elements did enter the children's play. Steven rushed from the operating table to say, "Dr. K, my patient is bleeding. I'm losing my patient." When told to go to the blood bank, Steven replied, "There's no blood in the blood bank." He did allow Dr. K's next suggestion (to ask one of his colleagues to get blood) to end the crisis on a positive note, and he convinced one of his friends to give blood. Sam, all of a sudden, went to the phone and announced "There's a fire at Mt. Sinai." He kept yelling, "911. Fire. Come to Mt. Sinai." Kristen, a 4½ year old Barbra Streisand look-a-like, with a raspy voice, got into a corner, started to squat, and announced, "I'm having a baby."

This kept the children's attention for about 2 hours. One anesthesiologist wouldn't take his mask off and stayed in role for the entire time. After about 50 operations with a 100% positive outcome, the dolls were gently removed to the recovery room. The teacher then put a picture of a man on the floor. Working with the children who were still interested (about five of them), she had them put cut outs of different organs in place. They could also write the name of the organ with her spelling it. Then she took red and blue thread to explain the passage of the blood through arteries and veins.

The Value of Play

This story illustrates many of the reasons we study children's play. It is charming. It captures the wonderful creativity and spontaneity of children. Though the adults in this vignette initiated the play, the children took to it with delight and stamped it as their own. Because of this, their play serves as a window into their interests, their cognitive functioning, their emotional concerns. The story also illustrates how easily play can be used as a tool for teaching information and values, and how creative, inventive, and hardworking teachers of young children can be.

Indeed, the position of the National Association for the Education of Young Children (Bredekamp & Copple, 1997) is that child-initiated, teacher-supported play is an essential component of developmentally appropriate practice. Early childhood teachers recognize that play is an important vehicle for children's social, emotional, and cognitive development and use play to support and advance development. Vygotsky (1933/1978), a Soviet psychologist whose writings first became available in English in the 1960s, has been influential in this contemporary view of early childhood curricula. He proposed that a child's play, under adult guidance or in collaboration with more capable peers, creates a zone of proximal development, a zone in which the child can jump above the level of his or her normal development. In other words, according to Vygotsky, play actually sets the stage for subsequent development, and it is during play that we may see children at their most competent.

Preschool policymakers usually do not need to be convinced of the value of play for curricula. Primary school policymakers are more likely to need to be convinced, particularly as expectations for academic progress at younger and younger ages become commonplace. The legitimacy of the school recess period has even come into question in some quarters (Pellegrini & Boyd, 1993). There are also cultures in which parents do not value play nor engage in infant-child play (Roopnarine, Lasker, Sacks, & Stores, 1998). Additionally there are periods in history when play has been devalued. Sutton-Smith (2000) describes negativity toward play in agricultural societies needing children's labor and in many cultures of low production throughout Africa and the Americas. Play was also rejected during the several hundred years of European history associated with the arrival of industrial work hours and puritanical attitudes. According to Sutton-Smith, the result of several centuries of viewing play as a useless activity has meant that most twentieth-century theories of play and research have focused on showing how useful play actually is. Generally, those who argue the importance of play for children point to the many developmental assets in cognitive-linguistic and affective-social domains that are associated with play (Fisher, 1992; Pellegrini & Boyd, 1993). Children who engage in sociodramatic play tend to show more social competence, creativity, divergent thinking, language and reading skills, and impulse control, among other things. (Of course, the correlational nature of these relationships does not reveal whether play leads to these developmental advances, whether these other abilities lead to enhanced play abilities, or whether a third factor underlies success in both.)

In this chapter, an overview of how early twentieth century interest in children's play led to its use for intervention and assessment is followed by a section on the advantages of play, particularly play-based assessment, in contemporary school psychological practice with young children. The chapter next takes up the knowledge, skill base, personal qualities, and professional training needed to implement play-based assessment and interventions. A consideration of best practices in play assessment includes different models of assessment and a description of limitations aimed at giving a balanced picture of its potential. Recommendations for practice are made in light of advantages and limitations. The section on play interventions deals with play therapy (interventions aimed at diminishing emotional problems and disturbances) and interventions emphasizing developmental possibilities for children with special needs (in order to teach age-appropriate play activities). Descriptions of various approaches, outcome research, and recommendations for practice are given for both types of interventions.

How Play Came to be Used for Intervention and Assessment

The psychologists who dominated play theory in the first half of the twentieth century, among them Vygotsky, Freud, and Piaget, dealt with play as a secondary topic (Rubin, Fein, & Vandenberg, 1983). Interestingly, they all thought that children sought to express themselves through pretense play and that play results, in part, from wish fulfillment. Freud originally proposed that play provided children with an avenue for wish fulfillment or catharsis; that is, for safely venting unacceptable wishes. Later, he came to see that play also afforded opportunity for the mastery of traumatic events (the repetition compulsion in action). Through repetition in play, the child could spontaneously work over and assimilate anxiety-provoking situations. In play, children are able to exercise control instead of enduring events passively. They may do instead of being done to. They may stop and start the action at will, dealing only with as much of their experience as they can manage at a time. The belief that play can help children deal with traumatic events has lead to its use with hospitalized children and children who have suffered physical and sexual abuse (Gil, 1991).

Although Freud recognized the importance of play, he did not use it in treatment; his own therapeutic efforts were geared toward an adult population. His ideas about how play might aid the development of emotional stability, however, paved the way for its use in clinical and school settings. Play started to be used in psychoanalytic therapeutic work with children by Hug-Hellmuth in the late 1910s, and by Melanie Klein, Anna Freud, and Margaret Lowenfeld in the 1920s and 1930s (O'Connor, 1991).

In the 1940s and 1950s, ego psychologists studying play, most notably Erik Erikson (1950), expanded on its mastery aspects. They came to regard play and fantasy as cognitive skills that could be used to deal with conflict and anxiety and restore a sense of mastery. Difficult experiences could be replayed until a more satisfactory outcome was worked out. Erikson likened play to dreams and saw it as the royal road to the unconscious in children. Play disruptions signaled the breakdown of effective defenses or ego coping in the face of anxiety that was being expressed in the play. To evaluate play, according to Erikson, one needed knowledge of what play was expected of a child of a given age in a given community as well as individual and family dynamics.

Just as with adult treatment, play therapy began to be used by therapists of different theoretical orientations. Virginia Axline's translation of Roger's nondirective client-centered approach into play therapy is one well-known example, partly because of the popular book, *Dibs: In Search of Self*, that she published in 1964. In the 1960s other forms of child treatment began to challenge the analytic movement. Forms of treatment that were behavioral, time-limited, cognitive, and family oriented became important. The function of play changed. For example, in behavioral therapies play is merely a way of engaging the child in behavior that can then be reinforced. Since children enjoy play, play can create a positive relationship that enhances the therapist's reinforcement potential. The play itself is not seen as having particular adaptive or developmental advantages, nor is it a vehicle for communication. The reader who is interested in learning more about different theoretical orientations as well as the history of play theories and play therapy can consult O'Connor (1991), O'Connor and Schaefer, (1994), and Rubin et al., (1983).

Play was primarily thought of as a treatment technique, rather than as an assessment technique, from the early part of the twentieth century to the 1960s (Gitlin-Weiner, Sandgrund, & Schaefer, 2000). It did, however, have an assessment component in the sense that play provided information about emotional functioning that was used in a child's treatment. Play assessment in the form of naturalistic observation continues to be a useful way of obtaining information about a child's emotional functioning both for professionals, such as teachers and school psychologists, who need to be alert to signs of potential problems, and for those who need to understand the children they are formally evaluating or treating. Pretend play that becomes too frightening for the child to continue, play that is perseverative, play that has no benign pretend solutions for conflict or negative feelings, and play that is fragmented as if the child cannot piece things together are examples of pretend play that may be signaling the impairing presence of anxiety (Gordon, 1993) in a child who needs help.

At the same time that play was primarily thought of as a treatment technique, developmentalists were building a body of literature that described children's play within a normative framework. This work eventually became the foundation for using play for diagnosis. The most notable of the developmentalists and play theorists, Piaget (1945/1962), classified play and games along developmental lines and related changes in play to changes in intellectual or cognitive development. He noted that infants first engage in practice play, also known as functional or sensorimotor play, for the first year and a half or so of life, then symbolic or pretense play from about 21 months to 6 years of age, and then games-with-rules from about 7 to 11 years of age. Other play theorists added the categories of constructive play, in which objects are manipulated for the purpose of constructing something, and rough-and-tumble play, which is boisterous, physical, playful action patterns performed at a high pitch of activity. Constructive play begins at about 24 months of age and predominates from 36 months on, and rough-and-tumble play begins at about 36 months but predominates at 4 and 5 years of age. Piaget saw play as assimilation or practice which consolidates initial learnings, not new learning. Since children incorporate experience into existing ways of thinking, their three types of play correspond to sensorimotor, preoperational, and concrete operational intelligence, respectively. He also thought that since the meanings invoked in pretense play include emotional meanings and wishes as well as cognitive aspects, pretense play is also a mechanism for consolidating or working out emotionally discordant experiences.

Among the early scales for assessing play, in addition to Piaget's classification scheme, was one by Parten (1932) for studying normal social development in play. After observing children in a nursery school setting in group free play for over a 9-month period, Parten devised a scale with several categories of social participation. These categories were (a) unoccupied behavior, (b) solitary independent play, (c) onlooker behavior, (d) parallel activity, (e) associative play, and (f) cooperative play. This scale has continued to play a role in research. It has also been updated and adapted for clinical use, most notably in the Play Observation Scale by Rubin (1989), a norm-based, time-sample procedure that evaluates both social participation and, drawing upon the work of Piaget, structural components of free-play behavior.

Another early scale, used in conjunction with psychoanalytic treatment, to determine functioning in a number of areas was developed by Lowenfeld (1939). Lowenfeld used a sand tray and many small objects with children whom she asked to build a series of worlds over the course of several sessions. Their productions were analyzed in terms of a variety of predetermined characteristics. Several diagnostic tools based on Lowenfeld's work were developed in Europe where they enjoy popularity, but they have been overlooked in the United States (Gitlin-Weiner et al., 2000). Until recently, subsequent scales developed here tended to be for purposes of research, and were hard for the clinician to find. Early (and some not so early) scales proposed for clinical work tended to be subjective. Currently, there is increased emphasis on developing reliable and useful play diagnostic tools because of the increased emphasis on assessment of infants and preschool children stimulated by federal legislation committed to extend educational services to the youngest of those who are disabled and at high-risk and because of the perceived need for alternative assessment techniques.

Advantages of Play Assessment With Young Children

The assessment of infants and young children is fraught with difficulties. They are hard to test and often poorly motivated to do "well." Furthermore, the standardized tests that are used are often technically inadequate for them (Bracken, 1987; Bracken, Keith, & Walker, 1994; Flanagan & Alfonso, 1995). Even when technically sound, tests may assess only limited domains and have limited utility in treatment planning (Bagnato & Neisworth, 1994; National Association of School Psychologists Delegate Assembly, 1991). These limitations have prompted the call for alternative strategies to be used to complement traditional assessments. Among the suggested strategies are parent interviews, parent-child interactions, peer interactions, well-known research paradigms such as the strange-situation to assess attachment security or the conditioning paradigm to assess cognitive functioning, clinical judgment rating scales, and curriculum-based assessment. Play-based assessments are strongly recommended. There is consensus among those recommending play-based assessments that it offers many advantages.

Play is the child's language. Long before children can talk about their emotional concerns or express what they know in words, they can express themselves in play. Play also offers this advantage to children with language impairments, to children who are second-language learners, to children with sensory or behavioral impairments that inhibit their expression on standardized tests.

As a window into children's minds, play allows us to gain insight into their emotional concerns and coping strategies. Play has been found to reflect so many other areas of functioning, that it may also be used to gain insight into cognitive development, intellectual capacity, ego functioning, social competence, motor functioning, and handicapping conditions (Fisher, 1992; Hughes, 1998; Rubin et al., 1983). Multiple domains can be assessed from the same data by members of various disciplines.

It is also easier to gain such insights through play than tests because children love to play. They are motivated when it comes to play. It is a pleasurable natural situation with minimum stress. This means that multiple observations can be made without the results being compromised by boredom or practice effects. It also means that we are likely to see children at their most competent during play. Play assessment is also ecologically sensitive. Parents can easily be involved and the child can be seen in various contexts in which he or she operates. An additional advantage to play assessment is that it encourages team cooperation because members of the various disciplines can be involved simultaneously or view the same videotaped samples of behavior. Play-based assessment can also easily be designed to yield information linked directly to intervention planning. The work of Linder (1993a, 1993b) and Lifter (2000) are examples of systems in which as much thought has been given to play-based interventions that may help children at various developmental levels as to the assessment instruments themselves.

Implications for School Psychologists

School psychologists have increasing responsibility for preschoolers as a result of legislation calling for early intervention for children with developmental delays or at risk for such delays. This is in addition to the responsibilities they already bear for young children in elementary school. From this overview, it should be clear that knowledge about the use of play for both assessment and intervention is important. Even psychologists working with older elementary-school youngsters need to understand how some of them may originally have been judged eligible for services while still in preschool or younger. For those who are working directly with young children, the development of actual skills in these areas is essential.

BASIC CONSIDERATIONS

Knowledge and Skill Base

Because play-based assessment and interventions must be selected and used on the basis of their appropriateness for a particular case, the knowledge and skill base needed for their use includes the broad one involved in working with young children and their families in general. In 1991 the National Association of School Psychology (NASP) Delegate Assembly adopted a position paper on Early Childhood Assessment that called for practices that are developmentally appropriate, ecological, family focused, directly linked to intervention strategies, nondiscriminatory, conducted by multi-disciplinary teams, technically adequate, and validated for the purpose for which they are used. Collaborations between professionals and between parents and professionals were also to be stressed. Recognizing that assessment of young children requires specialized training and skills beyond those required for the assessment of older children, the NASP Delegate Assembly (1991) recommended pre-service and in-service education to address:

- normal as well as atypical developmental patterns of young children;
- practices, procedures, and instrumentation appropriate for screening and assessment of young children, their families, and their environments;
- the use of empirically sound procedures and technically adequate instruments with demonstrated treatment utility;
- the selection of assessment techniques and utilization of findings from such assessments for the design, implementation, and efficacy evaluation of interventions;
- standards for early childhood psychological and educational assessment, including legal, ethical, and professional issues; and
- noncategorical service delivery for young children and their families (p. 1213).

The importance of knowledge of family systems theory and child-family interactions may also be inferred from this position statement.

Additional specific knowledge that is required for play-based assessment and intervention includes knowledge of the course of play in normal and abnormal development, situational and cultural factors that can enhance or limit play, play typical of children with different disabilities, and play disturbances that indicate a child is experiencing undue stress. Knowledge of various play-assessment instruments and their reliability and validity is needed. Because so many new instruments are being developed, it is important to know how to evaluate technical adequacy. Knowledge of different play interventions, as well as other interventions that exist for young children, along with knowledge of their validity and relative usefulness for different purposes, is also required. Because this is often knowledge in the making, it requires keeping up with the clinical and research literatures.

As far as the personal qualities needed, it really helps if you enjoy working with young children, if you are comfortable engaging in play with them, and if you delight in play and fantasy. It also helps if you have a natural talent for understanding and speaking in the language of play, although this can be learned. Flexibility and creativity will also give you an edge. Among the skills needed are skill in doing and recording naturalistic observations, skill in using one or more play instruments, skill in selecting and planning play interventions, and skill in carrying out one or more of these interventions. Some of the instruments and some of the interventions, such as play therapy, are harder to learn than others, and most require training and supervision to learn.

Professional Training

In order to learn skills, it is necessary to first gain knowledge, then observe the skill in action, and then practice the skill under conditions of being observed and critiqued. This is the reason for field-based practicum and internship experiences in pre-service training programs. However, many school psychologists already in practice have not had pre-service training to work with preschoolers and will need to learn these skills on the job. Whether you seek out continuing professional development within your work setting or postgraduate training, you will need opportunity to read and discuss the literature, to observe someone experienced, model the skills, and to practice new skills while you are observed on a regular on-going basis. This is particularly so if you are inexperienced with young children or if you want to learn to do play therapy. If you have not had pre-service, supervised training in treating young children, it is best to seek out postgraduate training from a university training program or institute to learn play-therapy techniques. Ongoing peer supervision groups are recommended after initial skill mastery.

BEST PRACTICES

Play Assessment

MODELS OF ASSESSMENT

Play may be used to assess the young child's skills in a number of domains (e.g., cognitive, language, motor, social). Play may also be used to assess the child's interests and emotional concerns or the nature of the child's typical interactions with caretakers and peers. Play skills themselves may be assessed to plan interventions to facilitate play skills. Play may also be used to help detect sexual abuse. Anatomically detailed dolls have been used when interviewing young children about suspected sexual abuse, though this practice remains controversial and should only be used by interviewers familiar with the legal constraints of providing evidence in such cases.

Obviously, a number of different formats exist for these various purposes, and the selection of an instrument depends upon purpose. Observations may be made of spontaneous play or play elicited by specific toys, situations, or interactions. Observations may be recorded in written anecdotal, narrative, or time-interval form and/or videotaped. Observations may also be coded according to rating scales that differ in terms of specificity. Some formats such as arena assessment (e.g., Linder, 1993a) include the entire professional team who participate as active spectators who record observations and score portions of assessment tools while one of them or the parent or a peer interacts with the child and facilitates play. When one of the professional team members acts to facilitate play, the team member follows the child's lead, encourages,. motivates, and also provides scaffolding for eliciting higher-level behaviors. The child is also observed playing alone. The assessment process is intended to include the family. It is videotaped, when possible, for both professional and parent reference. Team discussion after the assessment allows parents to join with professionals in analyzing what they have seen and to plan interventions. Linder's model of Transdisciplinary Play-Based Assessment is among the most widely used models of play-based assessment. It is designed for children between infancy and 6 years of age and examines performance across four domains of development (cognitive, social-emotional, communication and language, sensorimotor).

Descriptions of assessment procedures can be found in Fewell and Kaminski (1988) and Gitlin-Weiner et al. (2000). In addition to formal procedures, assessment based on play can also be conducted through play observations that are less formal or open-ended. Segal and Webber (1996) call these observations nonstructured because they are open-ended, but they do require structuring by the clinician in the sense that decisions must be made about participants, setting, toys, focus of observation, how to record the data, and how to write up the observation. It is also possible to do targeted observations of play behavior (e.g., how often a child initiates play with other children, how well the child handles frustration while playing) and devise a coding system that would do for interval, event, or ratings recording. To interpret the results of these less formal procedures, it is necessary to know the contextual factors that can elicit and inhibit play processes (see Pellegrini, 1998; Rubin et al., 1983). Three examples of contextual factors that affect play are that children will display the highest level of competence in play in the presence of peers compared to adults, with friends compared to nonfriends, and with gender-consistent toys.

LIMITATIONS OF PLAY-BASED ASSESSMENT

The advantages of play-based assessment are many and have been described in the Overview of this chapter. Despite its great promise, it must be noted that currently there are only a few existing studies that support the reliability and validity of play-assessment instruments. The one scale that is thought to have more evidence of validity than other scales, the Play Assessment Scale by Fewell, has no evidence of reliability and is not available commercially (Athanasiou, 2000). We therefore lack sufficient information to conclude that other observers using the same instruments would come up with the same findings or that the information obtained from play assessment correlates with information from other developmental measures or that the interventions they suggest lead to significant developmental changes, when implemented. With respect to reliability issues, it is particularly difficult to obtain high standards when observations are flexible, naturalistic, or unstructured.

Additionally, most play assessment instruments give qualitative information about the presence or absence of developmental skills. While this may be useful for developing a curriculum for a youngster, it might not be sufficient to gauge the seriousness of a delay or deficit or to determine eligibility for services. Different instruments also measure different skills and give only partial information about a child's development . Play assessments may also be expensive, time consuming, difficult to arrange, require a great deal of skill to conduct and analyze, and be considered intrusive by some parents (Segal & Webber, 1996). At present it makes sense to consider play-based and traditional norm-based methods of assessment as complementary procedures. We need to know with whom play-based procedures work best and how they can be assimilated into practitioners' existing knowledge base (Bracken, 1994).

RECOMMENDATIONS FOR PRACTICE

The recommendations that follow are consistent with (though not limited to) position statements made by the NASP Delegate Assembly (1991) on early childhood assessment and the Zero to Three Work Group on Developmental Assessment (Greenspan & Meisels, 1994).

1. Use play assessment as one source of data to validate and expand information from other sources. Play data should never be used alone to make diagnostic or placement decisions. It is most likely to have greatest use in identifying instructional strategies and educational goals. As Bracken (1994) has pointed out, those advocating alternative assessment procedures solely need to present evidence that the procedures have at least as much reliability and validity as those they are meant to replace.

2. Whenever possible, use valid and reliable scales to analyze play data. This provides operational definitions for the behavior to be assessed and increases reliability of observations.

3. Carefully record what has been observed.

4. The importance of multiple sources of information applies to play assessment itself. Include structured and unstructured play sessions. Observe on more than one occasion and in more than one kind of situation.

5. Play content is like projective content in that it cannot be interpreted without additional sources of information. Play content may reflect how the child actually responds to events or wishes he or she could respond or has seen others respond. Play content may reflect the expression of impulses typically controlled. It may also reflect turning what has been passively experienced into an active form in order to reassert a sense of control. Get information about the child's actual behavior so that interpretation of play content is more than guesswork.

6. Try to observe play in the child's natural environment to appreciate the influence of the environment. This is also most likely to give a child with disabilities the chance to show his or her best play behavior because he or she will be most at ease and less likely to be distracted than in a classroom or a novel situation.

7. Try to observe the child in play with the parent(s) or other familiar caregivers.

8. Do not do an entire assessment in the space of one day.

9. Give the child time to explore the environment and get comfortable before beginning an observation. Incorporating the child's toys in play sessions will also increase the child's comfort.

10. Children who come from backgrounds that do not value play will need prompting and time to engage in play. Judgments about their play will have to be delayed until they have been given sufficient opportunities to engage in play. If parents have not encouraged play for cultural reasons, then norm-based assessment of cognitive functioning may be more appropriate.

11. Have someone familiar with the child's culture and language on the team when working with culturally different children.

12. Work with families as team members to get information about the child, to determine their needs and resources, to help analyze the play data, and to generate and implement recommendations.

13. View the process of assessment as the first step in a potential intervention process

Play Interventions

Play interventions may be divided into (a) those aimed at diminishing emotional problems and disturbances (play therapy), (b) those emphasizing developmental possibilities for children with special needs in order to teach age-appropriate play activities, and (c) those that are part of general educational curriculum emphasizing cognitive effects (Hellendoorn, van der Kooij, & Sutton-Smith, 1994). Play interventions in the third category also include (a) play-training programs that help young children with environmental disadvantages such as poverty make gains in pretense and sociodramatic play to increase social participation and language, (b) programs training parents to play with their infants to increase parenting skills, (c) teacher interventions in play aimed at influencing specific social behaviors and attitudes, and (d) social-skills training. While social-skills training is not, strictly speaking, a play intervention, with younger children it typically involves training those children in developing positive approach responses so that they may be able to play with peers.

This section will focus on play interventions in the first two categories. Information on play interventions in the third category may be found in Hellendoorn et al., (1994), Singer and Singer (1990), Bredekamp and Copple (1997), and articles on social-skills training in this volume.

PLAY THERAPY

Theories of Play Therapy. Play therapy makes use of the therapeutic aspects of play, just as does any good preschool or kindergarten setting. In addition, it relies on a given theoretical orientation that directs what the therapist does and how the therapist understands what is going on. Although play therapy was first developed in the 1920s by psychoanalysts, it is no longer associated with any one theoretical position. It is used by practitioners with vastly different theoretical positions and methods (see O'Connor & Schaefer, 1994) because it is a natural medium for children. Children engage in play easily and happily, for the most part, and this facilitates the development of a positive relationship between therapist and child. For behavioral therapists, play serves only as a way of engaging the child in behavior that can be reinforced. It has no other intrinsic value.

Most other therapists consider play to be a medium of communication and not just a form of activity in which children will readily participate. The therapy room and its equipment are set up to facilitate that communication. Therapists show active, reflective, listening by reflecting the thoughts and feelings the child expresses in play: at first, by making running comments on the content of the play (e.g., That doll is playing games by himself and the other dolls are playing together.") and, later, by adding affective or motivational comments about the child's play (e.g., "That doll must feel lonely because no one is playing with him.") and, still later, when the time is appropriate, by tentatively broaching the distance between play feelings and the child's feelings (e.g., "Perhaps you feel like that sometimes."). Questions are also asked in the context of the play (e.g., "I wonder why the doll is playing by himself?") and only later, when appropriate, more directly. The therapist also reflects on the child's verbalizations and feelings.

In humanistic (or client-centered) therapy, reflection rather than interpretation is emphasized. Interpretation is much more important in therapies with a psychoanalytic or psychodynamic orientation because it is thought crucial for bringing about insight and change. The psychoanalytic therapist may also use the play to present information to the child. The therapist delivers an interpretation or information framed to apply to the characters in the play, thus allowing the child to maintain some distance and better tolerate what is being said (e.g., "That doll gets so frightened every time the daddy hits him that he thinks the only way to be safe is to hurt himself first . . . . He doesn't know that he can get other grownups, like his teacher or the doctor, to stop the daddy from hitting him if he tells them about it. I guess he doesn't know that because the mommy never stopped it when he told her, but she's probably scared of the daddy too."). There are a series of steps to follow in giving interpretations that start with interpreting within the play and end with interpreting directly to the child.

In the more cognitively oriented behavioral therapies, emphasis is placed on altering the child's thoughts and beliefs to produce behavior change. It was originally thought that preschool-age children were not developmentally ready for a cognitive approach. Cognitive-behavioral play therapy (Knell, 1998) is an example of an adaptation for younger children. As described by Knell, it is a structured, directive, problem-oriented treatment. The therapist may construct specific play scenarios and model adaptive behavior through the actions of dolls or puppets. The doll or puppet model may verbalize problem-solving skills or solutions to problems that parallel the child's difficulties. Cognitive distortions, even developmentally appropriate ones such as the fear of falling down the toilet, can be corrected. Children may also be provided with positive self-statements as a coping device (e.g., "I will make new friends when I move.") and be helped to label feelings so they can think about them. This all sounds very much like "interpreting within the play." Mastery through repetition in play also seems to be redefined as a desensitization paradigm in cognitive-behavioral play therapy; that is, play is useful as the activity that is incompatible with anxiety. Cognitive-behavioral play therapy is more directive than some psychoanalytic therapies, and its interpretative focus is more on maladaptive thoughts. Despite these exceptions, there seem to be many similarities in what therapists do.

Other models of play therapy stress a corrective emotional experience to repair caregiver/child interactive failures (e.g., Jernberg; see O'Connor, 1991). A number of techniques are used to produce positive interactions between the child and therapist, among them using every opportunity for making physical contact, insisting on eye contact, placing exclusive focus on the child, and keeping the sessions cheerful.

Following the development of a strong bond, the therapist gradually introduces others (caregivers, siblings, peers) into the playroom so that the child's newly developed interactive style will generalize. Although this is a therapist-directed structured approach, the therapist communicates through play, using reflection and interpretation, in a way similar to that described above for psychodynamic approaches.

The developmental, individualized, relationship-based approach to the treatment of "developmentally challenged" children (usually those falling within the autistic spectrum disorders) also emphasizes the development of relationships and communication (Greenspan & Wieder, 1998). Both therapists and caregivers, working individually, become the child's active play partner in a way that encourages the child to interact with them. The child is also encouraged to express feelings or intentions in pretend play and words.

Contexts in Which Therapy Occurs. Play therapy may occur in different contexts. Children may be seen individually or in a group. They may be seen individually by a therapist in their classroom in "push-in therapy" during which they are coached on how to interact with their classmates. They also may have their parent(s) or peers as co- or primary therapists. The number of techniques and contexts is dizzying. Play therapy has also been used in different kinds of situations: in work with children who have been abused, children in crises, traumatized children, autistic children, and children facing medical treatments and/or hospitalization. From the perspective of those who espouse the various therapies, it can be used with children with a wide variety of problems and ages.

Outcome Research. To best serve the mental health needs of children, we need to be able to identify specific interventions for specific problems and diagnoses. We should like to be able to say of play therapy that it has demonstrated efficacy for children with specific problems and demonstrated superiority over other interventions. We should further like to specify what kind of play therapy to use in different situations. All that we can say is that, on average, play therapy has demonstrated efficacy; we lack sufficient information to be more specific. Too few studies of play therapy have been done (Eyberg, 1992), and even fewer of these have been rigorous enough to be included in meta-analytic reviews of therapy outcomes. This is so despite the fact that play therapy is widely used in practice (Tuma & Pratt, 1982).

A recent search turned up only two meta-analyses that either reviewed play therapy studies or included play therapy as a category of treatment to analyze. Both reported an effect size of two-thirds of a standard deviation, or between moderate and large, according to Cohen's (1988) interpretation of effect size. A difference this size would have considerable practical and clinical significance. The difference in the average child treated with play therapy would be normally noticed in daily life. The first meta-analysis (Casey and Berman,1985) compared play and non-play treatments and found them to be equally effective. This means that play treatments were found to be neither more nor less effective than non-play treatments. There was not enough information, however, to tell what kind of play treatment was being compared with what kind of non-play treatment or whether both play and non-play treatment were equally effective for different problems, or for children of different ages. The second review of play therapy research (LeBlanc and Ritchie, 1999), which found a similar effect size, also suggested that modes of play therapy, like filial therapy (a client-centered approach) and parent-child interaction therapy (a behavioral approach), in which parents become additional therapists, may be more effective than other forms of play therapy.

The research base for play therapy is thin, and it gives limited guidance on what type, if any, is most effective for preschoolers, for children of different cultures, or for different problems. It is necessary to turn to the more broadly based psychotherapy and treatment literature for further information. The findings of over 300 outcome studies conducted between 1952 and 1993 have been summarized in meta-analytic reviews. The following conclusions may be drawn (Weisz & Hawley, 1998). First, there are effective interventions for children and adolescents that produce substantial effects. Effect sizes hover around 0.80, the level considered "large" by Cohen (1988). The average child included in an intervention group scored higher on outcome measures than 76–81% of children in a control group. Second, the magnitude of these effects is similar to those found for treatment of adults. Third, child treatments produce effects that are relatively lasting in their impact. Fourth, these effects are relatively specific to the problems targeted in treatment. Fifth, treatment effects are stronger for behavioral and cognitive-behavioral than for non-behavioral techniques.

It is clear that there is strong empirical support for behavioral and cognitive-behavioral interventions. It should be noted that most of the reviewed behavioral and cognitive-behavioral interventions do not involve play. Hopefully, cognitive-behavioral play therapy will also receive empirical support when it is reviewed. In making sense of the demonstrated empirical superiority of behavioral and cognitive-behavioral over non-behavioral techniques, it also should be noted that non-behavioral treatments have not received as extensive an evaluation as behavioral ones. More than 75% of the studies in most child meta-analyses test behavioral and cognitive-behavioral interventions (Weisz & Hawley, 1998). This figure increases for recent meta-analyses. Ollendick and King (1998) did not even bother to review any therapies other than behavioral and cognitive-behavioral ones for childhood phobic and anxiety disorders because of findings that treatment effects, in general, are stronger for behavioral than non-behavioral techniques. This does a disservice to studies that have demonstrated that psychodynamic and client-centered therapies can be effective in treating childhood internalizing problems, including anxiety disorders (e.g., Fonagy & Target, 1994; Kolvin et al., 1981).

It also leaves unexamined the very procedures (e.g., family, eclectic, psychodynamic) that practitioners, including school psychologists, report they frequently use (Kazdin, Siegel, & Bass, 1990). A recent meta-analysis of school-based studies of counseling found 17 studies from 1985 to 1994 that fit (methodologically rigorous) criteria for inclusion (Prout & Prout, 1998). Not one of them included individual counseling, although a national sample of school psychologists reported in 1993 that this was the most frequently used modality in the school (cited in preceding study). Further, all of the school-based studies involved cognitive- behavioral variants of treatment. Empirical research on psychotherapy as it is practiced is needed.

The special issue on empirically supported intervention techniques in the *Journal of Clinical Child Psychology*, 27(2), 1998, is recommended for the information it provides on the benchmarks that must be met by current clinical treatments before they can be as confidently recommended as can certain behavioral and cognitive-behavioral treatments. At present, however, we cannot say with certainty what kind of play therapy is most effective for what kind of problem. Relatively few of the studies included in most meta-analyses involve psychotherapy as it is practiced in most settings. I am afraid we also cannot say with certainty what school psychologists are actually doing when they say they are doing play therapy. It is not unusual to have a recommendation for play therapy on an Individual Educational Plan in the New York metropolitan area. It seems to mean different things in different settings. It can be translated, for example, as a recommendation for psychodynamically oriented play therapy or a developmental recommendation to enhance language skills or enhance play skills or social skills. The only common meaning seems to be that it will be given by a psychologist.

Play Therapy and Aggression. Nondirective play therapies are not considered useful for children who are very aggressive or engage in considerable acting out. The intense structure and quality of limit setting these children require runs counter to the philosophy of nondirective approaches. In addition, aggressive play (or watching filmed aggression) may actually stimulate rather than reduce further aggression in aggressive children who are motorically oriented and reveal much action and little thought or imagination in play activities (Biblow, 1973). Catharsis by itself, without emotional restructuring or reorganization, is not healing. Psychoanalytic treatment (presumably including play therapy for the younger children) was found to be much less effective for children with disruptive behavior disorders than children with neurotic or internalizing disorders, though differences in treatment effectiveness disappeared if the children remained in intensive treatment for 3 years (Fonagy & Target, 1994). However, the percentage of children with disruptive behavior disorder who returned to a level of functioning within the normal range falls far short of rates of improvement for such children who receive a combination of parent-management training and problem-solving skills training (Brestan & Eyberg, 1998).

Recommendations for Practice. Two useful sources of information on handling everyday issues in play therapy and setting up a playroom are Dodds (1985) and Ginott (1961). (I particularly like Ginott's recommendation that a maid be available to put the playroom back to rights after each session.)

There are so many different techniques and theoretical orientations to treatment that fall within the rubric of play therapy that it is impossible to give any but the most general recommendations below.

1. Consider whether simpler interventions in the classroom might help or whether modifying the child's classroom or home environment might be more appropriate.

2. Form collaborative relationships with caretakers. Involve them as much as possible in their children's treatment and in parent-training programs. We need to work with significant adults in the child's world, including teachers, to carry out change in that world.

3. Consider play therapy to help a young child deal with (certain) emotional or developmental problems if the child's communication can be facilitated by play. The range of age for which it should be considered is roughly between 3 and 12 years, with exceptions at both ages. With older children, the play will likely be games, rather than fantasy play, and many preteens may opt for communicating directly through language.

4. Until we have outcome data to the contrary, consider play therapy primarily for helping a child deal with internalizing or overcontrolled problems. Play therapy is not the method of choice for getting the child to change behavior that disturbs others. This may happen as a byproduct as the child feels better emotionally and develops more mature ways of dealing with stress, but it cannot be guaranteed.

5. For children with serious problems in aggression, consider first parent-management training for parents and problem-solving skills training and behavior modification interventions for the children.

6. Any child seen in play therapy in order to ameliorate emotional problems or negative feelings thought to be causing learning problems should receive academic remediation as well. The same may be said about the need for social skills training for a child seen in order to ameliorate emotional problems thought to be causing social ones.

7. Building a positive relationship is important no matter what one's theoretical orientation is. Techniques that convey understanding, respect, and nonjudgmental acceptance work as well with children as they do with adults.

8. Although we may accept all symbolic behavior in play, limits should be placed on behavior that might hurt the child or the therapist, or encroach upon the ability of the therapist to do his or her job. Ginott (1961) is recommended as a good source for how to set limits.

9. Set goals to guide treatment and evaluate whether you are reaching goals.

10. Review your work in ongoing supervision with peers or a supervisor.

PLAY-BASED INTERVENTIONS FOR CHILDREN WITH SPECIAL NEEDS

Play in Children With Developmental Disabilities. Play difficulties have been linked empirically with various handicapping conditions. (See Hughes, 1998, and Rubin et al., 1983, for summaries of findings.) Currently, many researchers believe that children with autism have unique, specific, deficits in symbolic play (and language) that cannot be explained by level of cognitive development or degree of mental retardation alone. A paucity of symbolic play is considered characteristic of autism. When it comes to other types of disability, however, it is much less clear that play differences reflect innate deficits in play abilities. For some groups, such as pre-term infants and children with intellectual impairments, the issue is primarily one of delay. Hughes (1998) and others have suggested that the issue for children with physical and social disabilities and for victims of child abuse may be one of lack of opportunity. A blind child, for example, will not explore what he or she cannot see unless adults make special efforts to alert the child to what is available and remove physical obstacles to exploring. A child with limited mobility needs toys brought to him or her, and needs adults sensitive to the slightest cue of interest in a toy or in playing. Deaf children are unable to engage with others in the negotiations necessary to set up sociodramatic play because of their language difficulties and not because of innate difficulties with play. Children with disabilities may have limited social opportunities. This may be so even if they are in early childhood special education programs if such programs group them with similarly handicapped youngsters or put greater emphasis on teaching academic skills and less on play than is found in mainstream programs. They may also have limited social opportunities when they are in inclusion mainstream programs because they lack the social skills to participate in play. Children with mild disabilities are, on average, approximately 1 standard deviation below normally developing children in social skills (Gresham, 1997)

Teaching Developmentally Relevant Play. Play has long been the mainstay of early childhood programs. It is assumed that physical, emotional, and social development, as well as learning, will follow if the child's inherent motivation to play is supported (Bredekamp & Copple, 1997). The teacher provides an environment that is conducive to play and develops a curriculum that supports emerging play skills of the normally developing child. This is not sufficient for children with special needs who need to be helped to compensate for the constraints that limit their play. They need to be helped to learn to play, and they need to be taught the social skills that will enable them to initiate and sustain social play (to actually engage in play with their peers).

There are a number of formal linked assessment/intervention programs that help teachers (and parents) adapt their existing play strategies to meet the unique needs of a child with disabilities that are based on an assessment of where that child is developmentally (e.g., Lifter, 2000; Linder, 1993a, 1993b). Linder's (1993a) system of Transdisciplinary Play-Based Assessment, for example, provides summary worksheets on which observed competencies and deficits are directly translated into goals for the child. She also provides a companion book of suggested play and playful interventions to reach goals for each of the four functional domains that have been assessed (Linder, 1993b). The program of play interventions is planned jointly by the entire team, including parents.

Lifter (2000) also directs interventions toward developmentally relevant activities that she defines as activities that the child is at the threshold of learning; that is, they are the emergent categories of play as determined by quantitative criteria applied to a sample of play activities. Recommended procedures for interventions build on the standard practice in Early Childhood Education of following the child's lead in terms of what he or she appears to be paying attention to and incorporating least-to-most prompting procedures to shape new behaviors (Sulzer-Azaroff & Mayer, 1991). Thus one might comment on a cup that a child was playing with and suggest additional things that could be done with a cup that build upon the child's readiness to learn certain kinds of activities. The assessment and the intervention planning are usually done by one person, typically a teacher. Interventions may be implemented by the classroom teacher, by a home-based therapist, or by a parent.

Children with disabilities have also been taught play activities to (a) compete with the occurrence of maladaptive behavior (e.g., Ballard & Medland, 1986) and (b) to increase prosocial behavior when they have skill deficits (e.g., Stahmer, 1995). The second approach has included teaching symbolic play to children with autism. Generally, these interventions have not employed systematic play assessment procedures. Instead, objectives have been determined based on what could be done with appealing toys for the first approach and a general knowledge of what children do when they play for the second approach.

Outcome Research. Play intervention studies indicate that children with developmental disabilities can learn play activities as a result of systematic procedures (e.g., Stahmer, 1995) and that the ease of learning such activities may be linked to their developmental, rather than chronological, relevance (Lifter, 2000). Studies also suggest that for some children the programs contribute to language development and social interaction (Fisher, 1992). However, most children with autism are still seen as socially unacceptable by their peers following play intervention programs (Schreibman & Koegel, 1996). Children with autism tend to respond less to peers than they do to adults after training procedures conducted solely with adults. Findings from social-skills training research with less handicapped youngsters also indicate that it is easier to change children's social behavior than it is to change their peers' perceptions of them (Kazdin & Johnson, 1994). Because peers and adults may see children differently, information from multiple sources is necessary for outcome data. The answer to how a child responds to an intervention for undercontrolled problems or poor social skills may differ depending on who is asked.

In general, much more research needs to be done before we can be sure that learning play activities leads to progress in overall development for children with disabilities or that play interventions are better than instruction that focuses only on the specific ability in question. While play-based assessment that puts intervention planning in the forefront is an important step in providing a link between assessment and intervention, it remains to be seen whether implementation of these interventions leads to improved functioning above and beyond improved play functioning.

Recommendations for Practice. Linder (1993b) provides the following general recommendations for implementing play interventions that may be useful in a number of different contexts or programs.

1. Intervene in a child's play only when it can be done unobtrusively without disrupting the flow of play. Wait till the child is exhibiting low levels of play or is playing in a perseverative fashion.

2. The child should be allowed to select and lead play activities as much as possible.

3. Determine what engages the child, and use that information to form an interactive relationship.

4. Responsiveness to the child's cues is crucial to enhancing adult-child interactions. Responsiveness is shown by responding to the child's cues and communicative intent, matching language and pace to that of the child, and staying with the child's agenda.

5. Make sure that you give children with disabilities a sufficient wait time (at least 5 seconds) to respond. Lack of wait time can result in the adult's dominating the interactions.

6. Use a variety of language strategies that have been found to increase children's communication efforts.
   - Mirroring: Repeat the child's actions, sounds, or words.
   - Commenting: Comment on what the child is doing or describe the content of the play.
   - Self-talk: Talk about one's own actions.
   - Expansions: Add new words or ideas when restating what the child has said or done.
   - Modeling: Model sounds, words, or language structures. Label actions, feelings, events.
   - Prompting: Prompt responses specific to the situation that the child can make.
   - Open-ended questions: Avoid questions that can be answered with one word.

7. Work collaboratively with significant adults in the child's world to carry out change in that world.

SUMMARY

The history of how play came to be used for assessment and intervention includes views of play as a means of emotional expression for children, a cognitive skill that could be used to deal with conflict and anxiety, a vehicle for learning, and a developmental phenomenon that follows a distinct sequence.

Play-based assessment provides an excellent alternative assessment strategy for young children because play is childhood's language. Children love to play. It is a pleasurable, natural, situation with minimum stress, a situation in which we are likely to see children at their most competent. It is an ecologically sensitive technique that easily involves parents, and it can easily provide information for developing interventions. Play-based assessment also encourages team cooperation because members of the various disciplines can be involved simultaneously or view the same videotaped samples of behavior. A number of different formats exist for the various purposes to which play-based assessment may be put. Play may be used to assess skills in a number of domains or to assess play skills themselves in order to facilitate play skills. It may be used to assess emotional concerns, the nature of the child's interactions, and the possibility of abuse.

Despite all of its advantages, play-based assessment is not an automatic answer for all of the ills of traditional standardized testing with young children.

We lack information on its reliability and validity, among other limitations, and it should be seen as a complement to, rather than a replacement for, existing instruments of proven reliability and validity.

Play is often used to influence development because it has so many important developmental consequences and because it is so easily influenced. Play interventions may be divided into (a) those aimed at diminishing emotional problems and disturbances (play therapy), (b) those emphasizing developmental possibilities for children with special needs in order to teach age-appropriate play activities, and (c) those that are part of general educational curriculum emphasizing cognitive and social effects. This chapter deals with interventions in the first two categories.

Meta-analytic reviews of outcome studies of child and adolescent interventions for emotional problems are coming up with positive findings. They indicate that there are effective interventions for children and adolescents that produce substantial effects, and these interventions include play therapy. There are, however, insufficient data to know what kind of play therapy, if any, is best for what type of problem. This is unfortunate because we need to be able to identify specific interventions for specific purposes and problems in order to best serve the mental health and developmental needs of children. Certain recommendations for best practice can still be made despite the limitations of our knowledge.

Play intervention studies indicate that children with developmental disabilities can learn play activities as a result of systematic procedures. For some children, the programs contribute to language development and social interaction. While these are very encouraging findings, more research needs to be done before we can be sure that learning play activities leads to progress in overall development for children with disabilities or that play interventions are better than instruction that focuses only on the specific ability in question. Some general recommendations for implementing play interventions may be useful in a number of different contexts.

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This book is a good resource for parents as well as professionals. Recommending a book explaining the importance of play in a child's life may help parents appreciate intervention efforts. The authors manage to cover important research at the same time that they unfold a wonderful tale: "the special mystery of how we develop our human capacity for mental travel through time and space."

80 Best Practices in Personality Assessment

Howard M. Knoff
University of South Florida

OVERVIEW

The assessment of child and adolescent personality remains an important activity for school psychologists given the mandate of the Individuals with Disabilities Education Act (IDEA) to identify and provide services to emotionally disturbed (ED) students. Beyond IDEA, however, the personality assessment process helps us to better understand the significant number of social-emotional and behavioral problems that *non-special education* students manifest in today's schools and communities. Clearly, through personality assessment, school psychologists can provide parents and educators with insight and direction into such problems as truancy, drug abuse, dropping out, teenage pregnancy, suicide, and the emotional impacts of divorce, poverty, rejection, and academic failure. But, most importantly, school psychologists can provide these individuals with recommendations and action plans that decrease or resolve current child and adolescent problems such that they can be prevented in the future. This is the bottom line of personality assessment. Personality assessment is a process of collecting valid data to explain the causes for or contingencies relevant to a child's social-emotional, behavioral, or affective difficulties. This assessment is useless in isolation; it must be linked with viable, acceptable, and socially valid interventions that are successfully implemented with ongoing attention to treatment integrity and evaluation.

Within a context of comprehensive school psychological service delivery, it is essential that school psychologists understand normal and abnormal personality development and apply this information to empirical models that explain children's social-emotional, behavioral, and affective development. In addition, school psychologists must identify what they want to accomplish from the personality assessment process as well as what their school districts and multidisciplinary teams want from this process and whether these two sets of goals converge. While the ultimate personality assessment goal is to develop and implement effective intervention programs for referred students, other goals for the school psychologist might be (a) to determine who "owns" a specific referred problem (e.g., the referred child, a referring teacher or parent, a dysfunctional system, or a combination thereof); (b) to validate hypotheses explaining how a referred child's behaviors are being caused, encouraged, reinforced, or supported; (c) to create a sound baseline of data so that interventions can be evaluated from an appropriate context so that an accurate presenting history can be documented; and (d) to identify the referred child's behavioral assets and the home and school's resources so that they might be integrated into an intervention program.

Relative to the school district, the primary goal of personality assessment often is to determine a student's *eligibility* for special education services. This is unfortunate when it becomes the district's exclusive focus, because it reinforces the serious misconception that finding one eligible for special education is, in and of itself, an intervention. In total, special education represents an integrated spectrum of services needed by a student that are delivered in the most appropriate, least restrictive, setting possible such that the student is able to academically and/or socially and behaviorally progress. Moreover, special education decisions, relative to both eligibility and programming, must be made within the context of a functional behavioral assessment (FBA). Finally, given the prerequisite and the results of a student's functional assessment, the interventions needed by the student should guide the decision on *where* (i.e., the setting) services should be delivered. That is, the setting should not determine the program or services, and the student's functional needs should influence that decision.

School psychologists must discourage their colleagues and child study teams from requesting personality assessments primarily as a means to qualify students for a placement into a class for the emotionally disturbed. More appropriate district-related uses of personality assessment might be (a) to identify and analyze recurring patterns of student behavior or affect so that effective preventive programs can be developed, (b) to understand the severity and demands of students' social-emotional problems so that optimal staffing patterns can be organized, (c) to investigate the relationship between unrealistic academic expectations and inappropriate student behavior so that curricular restructuring as appropriate can occur, and (d) to address student problems that do not require formal referrals or special education placements through teacher consultation, staff development, and pre-referral interventions. Ultimately, the best reason to initiate an assessment to determine a student's eligibility for ED services is the lack of sufficient progress in resolving specific social, emotional, or behavioral concerns through systematic, classroom-based intervention. If this criterion were used, then the personality assessment process would begin with a focus on the need for more intensive intervention approaches for a specific, functionally defined and assessed "problem," and not on a process geared to evaluating a student against eligibility criteria that are difficult to operationalize and measure (see below).

Conversely, school psychologists must *encourage* their colleagues and child study teams to look at students from an ecological perspective. While initially this will involve the ecology of the classroom (or other settings) where a student's social, emotional, or behavioral problems exist, it also should include the student's broader ecology that includes peers, home, and community. Thus, school psychologists need to extend an assessment process that may focus heavily on just a student's educational (or school) context to one that considers and integrates a "psychology by education" context. While this may create some tension within certain child study team members, the "psychology by education" context is necessary in order to most effectively and functionally assess the intervention needs of a student. Critically, once these needs are identified and intervention components are determined, the child study team *then* can determine which components are the responsibility of the school and under what circumstances these components should be delivered. Thus, once again, students' needs drive the (potential) special education and intervention process, and it is not assumed that the school will be responsible for every facet of a needed program.

The need to analyze referred students from a "psychology by education" perspective is a best practice behavior for school psychologists. Children's behavior and affect are the interdependent products of the many institutions, settings, people, and contingencies with which they interact. Personality assessment must reflect these interactions through multitrait, multisetting, and multimethod analyses that necessarily involve data collection from home, school, and community sources. Once again, school psychologists must look at a student's entire ecology. The school setting is but one part of that ecology (Knoff, 1983).

BASIC CONSIDERATIONS

Given the discussion above, it seems crucial that school psychologists work from an empirical-based model that explains children's social, emotional, and behavioral development in a "psychology by education" and ecological context. Critically, this model should focus on children's skills and assets, the ways that they develop resilient responses to challenging events and environments, and the enabling conditions that facilitate their growth and development. This model, then, provides information that can help psychologists and educators to differentiate the reasons why one student is making good social, emotional, or behavioral growth and another is making slower or atypical growth. This model also must be sensitive to situation- and setting-specific behavior, and it should guide the school psychologist's thinking so that personality assessment becomes an empirically based problem-solving process that links assessment directly to intervention and that integrates referred problems and their needed solutions into a realistic and holistic context.

Significantly, a number of empirically derived models have been developed that synthesize the research literature and explain certain specific student outcomes (Knoff & Batsche, 1991a; McKee & Witt, 1990; Wang, Haertel, & Walberg, 1990). These models have been synthesized into a single, summary model with four primary student outcomes involving: (a) academic skills, (b) cognitive/metacognitive skills, (c) social/behavioral skills, and (d) adaptive behavior skills. While students' cognitive/metacognitive and social/behavioral skill difficulties generally prompt most personality assessments, the other two outcome areas also may be affected by problems in these first areas (e.g., when a student's poor problem-solving or on-task behavior skills interfere with academic or social engagement and, therefore, interfere with academic or adaptive behavior learning) or they actually may contribute the antecedent or moderator conditions that are influencing these problems (e.g., when a student's academic failure causes depression or withdrawal or when a student's poor adaptive behavior causes social skill problems because of peer rejection). Thus, at times, these four outcome areas are interdependent, and the conditions that influence them are dynamic.

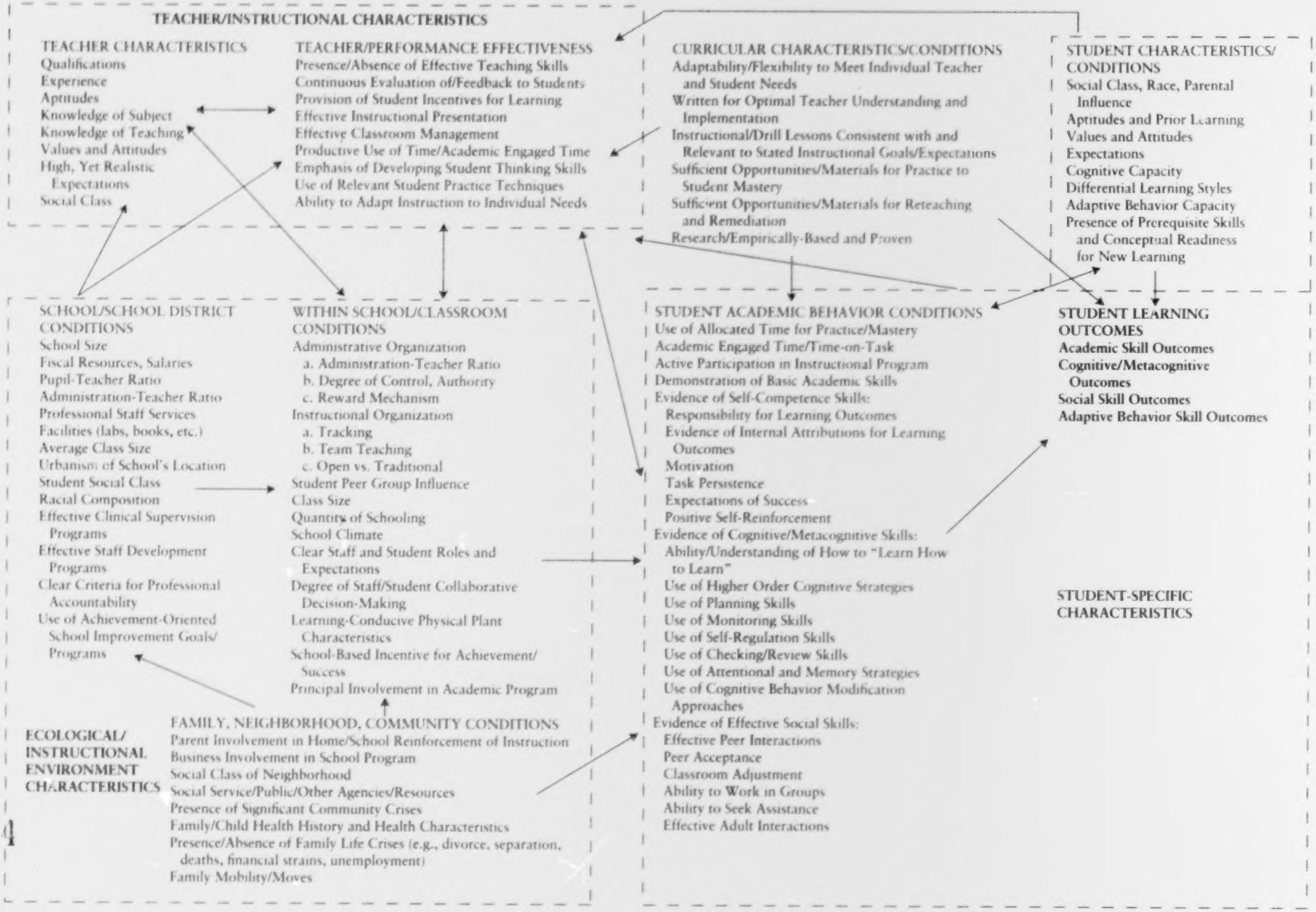
While it is usually very easy to identify student's outcomes in the four areas (and, thus, the specific social, emotional, or behavioral concerns with a specific, referred, student), it is not always easy to determine *why* students are being successful or not. As can be seen in Figure 1, research has shown that the four outcome areas are directly and indirectly affected (by the arrows shown) by eight different conditions or domains that exist in most students' worlds: family, neighborhood, and community conditions; school/school district conditions; within school/classroom conditions; teacher characteristics or conditions; teacher performance/teacher effectiveness conditions; curricular characteristics and conditions; student characteristics and conditions; and student academic behavior conditions. By using this figure, hypotheses explaining why a student is successfully or unsuccessfully attaining specific outcomes can be generated, and, once confirmed, they can be directly linked to specific interventions. Relative to personality assessment, this figure facilitates a functional assessment of behavior, within an ecological and problem-solving context, that links assessment directly to intervention.

Briefly, the six areas of the empirical model, as described previously and as related especially to cognitive/metacognitive and social/behavioral skill outcomes (Knoff & Batsche, 1991b, pp. 177–180), involve the following points:

1. Family, neighborhood, and community conditions: These involve characteristics or conditions of a referred student's family, neighborhood, and community as they relate ultimately to effective discipline and behavior management approaches and students' social skills, self-esteem, and self-management outcomes. They emphasize the importance of a positive and proactive home environment, the strengthening of conditions that teach and encourage resiliency, and the direct and indirect interactions that affect students' school readiness, social-emotional development, and success.

2. Within classroom/school/district conditions: These involve favorable and/or unfavorable characteristics and conditions within students' classrooms and school buildings such as the physical plant, the pupil-teacher ratio, the presence of mental health resources (e.g., school psychologists and guidance programs), professional development opportunities for staff, the administrative and instructional organization of the building, the range of same-age or same-grade students' academic and social skill levels, school and classroom climate, the presence and effective use of technology, and other conditions that explain teacher effectiveness. This area also extends to policies and procedures within the school district that affect classroom management and instruction and successful student achievement. These may include (a) the district's policies, for example, on multicultural education and tolerance, on student harassment and violence, and on grade retention; (b) the district's curricular support for social skills, conflict resolution, and other areas of health and mental

Figure 1. Summary of ecological characteristics and conditions that impact student learning outcomes


TEACHER/INSTRUCTIONAL CHARACTERISTICS
TEACHER CHARACTERISTICS
Qualifications
Experience
Aptitudes
Knowledge of Subject
Knowledge of Teaching
Values and Attitudes
High, Yet Realistic Expectations
Social Class
TEACHER/PERFORMANCE EFFECTIVENESS
Presence/Absence of Effective Teaching Skills
Continuous Evaluation of/Feedback to Students
Provision of Student Incentives for Learning
Effective Instructional Presentation
Effective Classroom Management
Productive Use of Time/Academic Engaged Time
Emphasis of Developing Student Thinking Skills
Use of Relevant Student Practice Techniques
Ability to Adapt Instruction to Individual Needs
CURRICULAR CHARACTERISTICS/CONDITIONS
Adaptability/Flexibility to Meet Individual Teacher and Student Needs
Written for Optimal Teacher Understanding and Implementation
Instructional/Drill Lessons Consistent with and Relevant to Stated Instructional Goals/Expectations
Sufficient Opportunities/Materials for Practice to Student Mastery
Sufficient Opportunities/Materials for Reteaching and Remediation
Research/Empirically-Based and Proven
STUDENT CHARACTERISTICS/ CONDITIONS
Social Class, Race, Parental Influence
Aptitudes and Prior Learning
Values and Attitudes
Expectations
Cognitive Capacity
Differential Learning Styles
Adaptive Behavior Capacity
Presence of Prerequisite Skills and Conceptual Readiness for New Learning
SCHOOL/SCHOOL DISTRICT CONDITIONS
School Size
Fiscal Resources, Salaries
Pupil-Teacher Ratio
Administration-Teacher Ratio
Professional Staff Services
Facilities (labs, books, etc.)
Average Class Size
Urbanism of School's Location
Student Social Class
Racial Composition
Effective Clinical Supervision Programs
Effective Staff Development Programs
Clear Criteria for Professional Accountability
Use of Achievement-Oriented School Improvement Goals/ Programs
WITHIN SCHOOL/CLASSROOM CONDITIONS
Administrative Organization
a. Administration-Teacher Ratio
b. Degree of Control, Authority
c. Reward Mechanism
Instructional Organization
a. Tracking
b. Team Teaching
c. Open vs. Traditional
Student Peer Group Influence
Class Size
Quantity of Schooling
School Climate
Clear Staff and Student Roles and Expectations
Degree of Staff/Student Collaborative Decision-Making
Learning-Conducive Physical Plant Characteristics
School-Based Incentive for Achievement/ Success
Principal Involvement in Academic Program
ECOLOGICAL/ INSTRUCTIONAL ENVIRONMENT CHARACTERISTICS
FAMILY, NEIGHBORHOOD, COMMUNITY CONDITIONS
Parent Involvement in Home/School Reinforcement of Instruction
Business Involvement in School Program
Social Class of Neighborhood
Social Service/Public/Other Agencies/Resources
Presence of Significant Community Crises
Family/Child Health History and Health Characteristics
Presence/Absence of Family Life Crises (e.g., divorce, separation, deaths, financial strains, unemployment)
Family Mobility/Moves
STUDENT ACADEMIC BEHAVIOR CONDITIONS
Use of Allocated Time for Practice/Mastery
Academic Engaged Time/Time-on-Task
Active Participation in Instructional Program
Demonstration of Basic Academic Skills
Evidence of Self-Competence Skills:
Responsibility for Learning Outcomes
Evidence of Internal Attributions for Learning Outcomes
Motivation
Task Persistence
Expectations of Success
Positive Self-Reinforcement
Evidence of Cognitive/Metacognitive Skills:
Ability/Understanding of How to "Learn How to Learn"
Use of Higher Order Cognitive Strategies
Use of Planning Skills
Use of Monitoring Skills
Use of Self-Regulation Skills
Use of Checking/Review Skills
Use of Attentional and Memory Strategies
Use of Cognitive Behavior Modification Approaches
Evidence of Effective Social Skills:
Effective Peer Interactions
Peer Acceptance
Classroom Adjustment
Ability to Work in Groups
Ability to Seek Assistance
Effective Adult Interactions
STUDENT LEARNING OUTCOMES
Academic Skill Outcomes
Cognitive/Metacognitive Outcomes
Social Skill Outcomes
Adaptive Behavior Skill Outcomes
STUDENT-SPECIFIC CHARACTERISTICS

health instruction; and (c) the district's outreach to the community such that preventive programs and approaches are prioritized over reaction ones.

3. Teacher characteristics/performance/effectiveness conditions: These involve characteristics and conditions that teachers bring to the classroom that ultimately translate into the effective management and instruction skills and behaviors that support student learning and development (e.g., background characteristics, professional training). Also included are those empirically identified skills, activities, and conditions that teachers demonstrate or create that make their instruction effective (e.g., their ability to adapt instruction, their use of social skills curricula and behavior management techniques). Finally, this area includes the strategies or approaches that teachers' use to motivate students' skills development and their consistency when interacting with students. When effective, these create positive instructional environments that are structured, predictable, and nurturing.

4. Curricular characteristics/conditions: These involve characteristics and/or conditions of the curricula being used and include the content as well as the process that is used to ensure student learning and mastery. Curricula here include those self-esteem, social skills, and other behavior management curricula that lead to student "learning" in the areas of self-control, self-management, and self-efficacy. In addition, this area also reflects the ability of these curricula to flexibly adapt to different types of students such that appropriate student-curricula matching occurs.

5. Peer characteristics/conditions: These involve characteristics and/or interactions within a school or classroom's formal and informal peer groups that influence student attitudes, perceptions, and behaviors toward a school's expectations and norms, climate and safety, and inclusiveness or exclusiveness. Relative to specific student situations, the conditions that permit a peer group to determine positive or negative student outcomes (or to encourage prosocial versus antisocial behavior) are important. Thus, this area helps to identify the links between certain antecedent or consequent peer control conditions and specific student outcomes. While these peer characteristics or conditions may be real or simply perceived by one or more students, they do, nonetheless, have some impact on these individuals.

6. Student characteristics/conditions: These involve often pre-existing characteristics and conditions, including neurological, physiological, genetic, and biochemical conditions, that relate primarily to a student's behaviors, emotions, affects, and cognitions. Cognitions here include a student's attitudes, expectation, beliefs, attributions, thoughts, and internal processes. All of the characteristics or conditions in this area should directly link to the social-emotional development of students and their ability to conform to social and situational demands. These characteristics and conditions also involve those behaviors that students exhibit that directly support their academic and social learning and progress such as their motivation, their self-competence skills, and their use of appropriate social skills.

In looking at the pathways outlined in Figure 1, school psychologists must differentiate between causal pathways and correlational pathways. Causal pathways involve conditions and characteristics that directly cause specific student outcomes. Critically, many of the characteristics and conditions within the student, teacher, and curricular areas above tend to be causal to student outcomes—although there are more correlational relationships within the latter two areas. Correlational pathways involve conditions and characteristics that influence student outcomes, increasing or decreasing the probability of their attainment depending on their positive versus negative impact. Many of the characteristics and conditions in the peer, classroom, school, district, family, and community areas above tend to be more correlational than causal.

Critically, the presence of causal versus correlational pathways has a direct influence on the functional assessment of student behavior. Indeed, while FBA tends to focus on classroom-based behavior (or the specific settings where referred, problematic behavior occurs) and to look for causal relationships that explain why problematic behavior is occurring (Gable, Quinn, Rutherford, & Howell, 1998; Tilly et al., 1998), school psychologists performing FBA must still acknowledge correlational influences that often occur in parts of students' ecologies outside of the classroom. Nonetheless, in the typical FBA model, a problem-solving process is used to (a) functionally identify a referred problem; (b) collect and analyze existing background information about the student and then the specific problem of concern; (c) gather contextual information that explains the circumstances, situations, or conditions that are associated with the existence *and the absence* of the problem behavior; (d) generate and then assess the hypotheses that empirically confirm the accuracy of these explanations; (e) link confirmed hypotheses to functional intervention plans that ideally emphasize the development, building, or strengthening of skills and positive behavioral supports; and (f) evaluate the impact of these interventions on problem resolution and student success.

From a problem identification perspective most referrals for personality assessment involve problems involving extreme or excessive amounts of behavior, inappropriate or unnecessary behavior, the absence or not enough of an appropriate behavior, or situationally inappropriate, irrelevant, or bizarre or idiosyncratic behavior. Critically, these problems influence students' social (or interpersonal), emotional (or affective), and/or behavioral (externalized or internalized) interactions; they may exist in isolated though pervasive settings or situations; and they may have a brief (or acute) or extensive history.

From a problem analysis perspective, seven basic questions are important as the FBA begins (Gable et al., 1998; Tilly et al., 1998):

1. When is the student most likely to engage in the problem behavior?

2. What specific people, events, factors, or conditions appear to be present and/or contributing to the student's problem behavior? Which of these people, events, factors, or conditions appear to precede or trigger the problem behavior, and which appear to follow the problem behavior?

3. Does the problem behavior involve a skill deficit or a performance deficit? If a performance deficit, does the problem behavior occur more or less often in the face of certain incentives and/or consequences? If a performance deficit, is the problem behavior a result of inconsistent expectations or the inconsistent delivery of incentives and/or consequences?

4. What function(s) does the problem behavior serve for the student?

5. What might the student be communicating through the problem behavior?

6. When is the student most successful and, therefore, less likely to engage in the problem behavior? Or, are there times when certain circumstances exist that either discourage or eliminate the problem behavior or encourage or introduce other behaviors that are incompatible with the problem behavior?

7. What other factors might be contributing to the student's problem behavior?

Ultimately, problem analysis moves to the generation and then the assessment of hypotheses that explain *why* the problem behavior occurs or does not occur. Given the questions above and using the ecological/empirical model discussed earlier, four primary areas of characteristics or conditions may functionally explain the existence of the problem behaviors, for example, in a classroom. These involve the referred student, the teacher or instructional process, the curriculum, and classroom or peer factors. That is, a student might be verbally aggressive toward a teacher and/or classroom peers during reading instruction in the morning (problem identification) *because* (hypothesis) the student

1. Is feeling uncertain or insecure about his reading skill and gets angry when put in situations when he might fail, especially when it occurs in front of his peers (student condition)

2. Has a teacher who focuses only on the correct answer, never provides instructive or positive feedback, asks questions without providing enough reflective time to answer them, and who uses competition amongst peers to "facilitate and motivate" instruction (teacher/instructional condition)

3. Is presented with reading material that is two grade levels above his instructional level and that

often involve content or stories that are not culturally sensitive or relevant (curricular condition)

4. Is grouped in a cooperative peer group that is focusing more on answers than understanding, that is frustrated with him because of his past failures, and that includes a number of students who have been grouped in an accelerated group for the past 3 years (classroom or peer conditions)

Taking a more positive view of this student and situation, it should also be recognized during this problem identification and analysis that the referred student demonstrates appropriate and prosocial interactions in all other academic areas and times during the school day, that he has a group of friends who accept him, that his reading "problem" is not affecting other curricular areas, and that the referred concern has not occurred in previous years.

As hypotheses are assessed, utilizing a FBA and problem-solving orientation, personality assessment focuses primarily on answering specific questions that confirm or reject the hypotheses generated. That is, personality assessment here maintains the functional assessment process, and it does not shift to a random search for student pathology or a narrow, test-by-test, determination of the students' eligibility for special education. If school psychologists make this "paradigm shift" and maintain the functional assessment focus, then the personality assessment process will lead to functional interventions that address the reasons for the referred behavior and that have a high probability of success in the natural environment where they occur. If this shift is ignored, then personality assessment will remain a random, subjective, and disconnected process that is student (not ecologically) centered, results in either global descriptions of behavior or labels of "pathology," and does not lead to effective or defensible interventions or functional services.

In summary, the considerations cited above create a foundation for sound personality assessment. Below, these approaches are extended and operationalized by focusing on the classification systems, pragmatic beliefs, applied approaches, and fundamental procedures that translate into effective personality assessment. After reading this chapter, school psychologists should not only have an updated perspective as to how to link personality assessment and intervention, but they also should have a working model that helps them to implement this important process.

Classification Systems Affecting Personality Assessment

Assuming a psychological and educational perspective of personality assessment, school psychologists must attend to the available classification systems that are used to categorize referred child and adolescent behavior. While the functional assessment of a students' behavior and affect will be more relevant to planning viable and effective intervention programs, the presence of these classification systems cannot be ignored given their widespread use and their determination of much of our diagnostic nomenclature. Three different classification systems, with their strengths and weaknesses, briefly will be reviewed: the IDEA definition of emotional disturbance, *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV), and empirically based classification approaches.

THE IDEA DEFINITION

Most states (approximately 75%) use the actual or an adapted IDEA definition of ED despite the fact that they may or may not use the ED label. Despite the apparent consensus, the fact remains that the IDEA definition (a) is predominantly an educational definition that does not lend itself to psychological differentiation or analysis, (b) requires behavioral operationalization in order to be used in a consistent manner, (c) necessitates only a *yes* or *no* "diagnostic" decision, (d) encourages a "medical-model" perspective of disturbed behavior; (e) still excludes (without definition) "socially maladjusted" students, and (f) ignores the co-occurrence of two or more behavioral or affective disorders in many students.

Expanding briefly, the IDEA definition focuses on conditions that "adversely affect educational performance," desensitizing our schools to children who progress educationally but still need socialization or mental health services. The definition leaves such characteristics as "inappropriate types of behaviors or feelings," "under normal circumstances," "over a long period of time," and "to a marked degree" to the state, school district, or individual multidisciplinary team to operationalize. This creates, at best, a great potential for inconsistency across referred children and, at worst, conditions allowing unchecked bias, inequity, and prejudice. Finally, the definition permits a simplistic "yes, the child qualifies as an ED child," or "no, the child does not qualify" mentality, which suggests that the child owns or does not own the causal pathology. This discourages an ecological perspective that focuses more on functional assessment, intervention, and problem resolution.

Over the past decade, many experts and a number of professional associations and coalitions have critiqued IDEA's ED definition, some proposing their own definitions and improvements (e.g., Forness & Knitzer, 1992; Gresham, 1998). In general, these new definitions addressed many of the cultural, normative, clinical, developmental, situational, and behavioral problems of the current ED (and past seriously emotionally disturbed (SED)) definition. And, they advocated a more multimethod, multisource, multisetting orientation and functional approach to assessment. Nonetheless, IDEA's ED definition persists, as does the need to operationalize the personality assessment process *at the school level* regardless of what definition is used. Thus, school psychologists must take a leadership role at the district and individual multidisciplinary team level to operationalize and systematize the ED definition currently in use. This will require discussions with all team members as to (a) what is typical and expected behavior in the classroom and school building from both a developmental perspective and a normative (school or community) perspective; (b) what types of behaviors, affects, and interactions fall under the ED definition, thereby requiring programmatic intervention (regardless of its setting); (c) what curricular, instructional, and mental health support services are available to "wraparound" an ED student such that a regular classroom placement can continue; and (d) what behavioral frequencies, intensities, and durations are needed for regular versus special education classroom placement decisions. Only by having clear ED procedures and definitions can a multidisciplinary team make consistent, objective, and functional decisions, simultaneously overcoming the weaknesses of the current IDEA definition. Only by operationalizing at a local level can a multidisciplinary team evaluate referred children; be sensitive to the community's individual strengths, weaknesses, history, and problems with these students; and determine what constitutes ED behavior for a specific community.

DSM-IV

The current version of the *Diagnostic and Statistical Manual of Mental Disorders* is the DSM-IV (American Psychiatric Association, 1994). Continuing its attempts to describe disorders as behaviorally as possible, the DSM-IV describes the following specific disorders of infancy, childhood, and adolescence: mental retardation, learning disorders, motor skill disorders, pervasive developmental disorders and specific disorders, disruptive behavior and attention-deficit disorders, feeding and eating disorders of infancy or early childhood, tic disorders, communication disorders, elimination disorders, and other disorders of infancy, childhood, or adolescence. Critically, there are other disorders that extend from infancy, childhood, and/or adolescence *through* adulthood that are classified elsewhere in the DSM-IV.

Despite the research reviews and clinical trials completed prior to its publication, the problems that existed in the previous DSM systems persist in the DSM-IV. Among the most critical problems are the DSM-IV's (a) dependence on a medical model perspective of behavior and pathology; (b) focus on signs, symptoms, syndromes, and diseases that more describe a referred student's problem than functionally assess why it is occurring; (c) excessive differentiation of different mental disorders; that is, moving from more than 100 diagnoses or labels in the first DSM to now more than 350 diagnoses or labels in the fourth DSM; (d) lack of improvement in the areas of diagnostic agreement among clinicians, test-retest reliability, and validity; (e) lack of clear applicability, for some diagnoses, in school versus home or community settings and given IDEA's definition and approach to ED (Atkins, McKernal, McKay, Talbott, & Arvanitis, 1996; Gresham, 1998).

As an example of many of these points, the inattention subset of DSM-IV's attention-deficit/hyperactive disorder (AD/HD) diagnosis is made for a disturbance of at least 6 months duration, beginning no later than the age of 7, and *involving at least six of nine specific manifestations*. Critically, the psychologist does not need to specify *which* six of the nine behaviors exist such that the diagnosis can be made, and some of these behaviors (e.g., often has difficulty organizing tasks and activities, often forgetful in daily activities, often does not seem to listen to what is being said to him or her) are behaviorally imprecise and dependent, at times, on situation-specific subjectivity. Thus, one ADHD "diagnosis" could be functionally different from another, and there would be no way for a psychologist to determine which of the various AD/HD behaviors were present unless they were specified in a psychological report. Without specifying the behaviors of concern, then, the AD/HD diagnosis is of limited use, especially in the development of appropriate intervention strategies and programs. When the diagnosis' behavioral manifestations *are* specified, then the AD/HD label is basically unnecessary. School psychologists' interventions will address these problematic behaviors, *not* the so-called "diagnostic" labels.

In summary, there are few, if any, compelling reasons why school psychologists need to use the DSM system. While some feel that their ability to label a referred problem means that they understand it and are ready to successfully resolve it, this has never been empirically demonstrated. What has been demonstrated is that the identification of behavioral skill deficits, performance deficits, and self-management deficits and their behavioral contexts and contingencies can be successfully addressed, and that these approaches are often more parsimonious, efficient, and well-accepted by referral sources and referred individuals.

Empirically Based Classification Approaches

An empirically based classification system can be developed from the factor analytic results of the many researchers who have analyzed the characteristics of emotionally disturbed and behaviorally disordered children and adolescents over the years (Achenbach & McConaughy, 1996). At a broad-band level, two factors—internalizing or over-controlled and externalizing or under-controlled—have consistently been identified. These factors broadly describe children who demonstrate depressed, withdrawing, or uncommunicative behavioral styles versus hyperactive, aggressive, or delinquent behavioral styles, respectively. At a narrow-band level, many different behavioral clusters have been identified, some of which vary developmentally across age, sex, and research sample. To date, the following narrow-band factors have been most consistently identified: aggressive, delinquent, attention problems, thought problems, social problems, anxious/depressed, somatic complaints, and withdrawn behavior (Achenbach, 1991), and conduct disordered, socialized aggression, attention problems-immaturity, anxiety-withdrawal, psychotic behavior, and motor excess (Quay, 1983).

From a psychometric perspective, the factor analytic approach, and the resulting broad-band and narrow-band factors, represent a very sophisticated approach to classifying behavior. However, this classification approach does not facilitate an accurate identification of all problems or the development of appropriate interventions in every case. In fact, it must be emphasized that, when factors are generated by a factor analysis, individual factors sometimes consist of items that are included for more theoretical than statistical reasons, these factors often represent clusters of correlated behaviors or characteristics that may or may not clearly define a clinical disorder, and these factors ultimately are named by the researcher. By way of implication, this suggests (a) that some factors may be multidimensional in nature despite the fact that a single factor is presented, (b) that the presence of an item within a factor does not imply a causal relationship relative to the diagnostic label of the factor, and (c) that there is a level of subjectivity involved in finalizing or naming any factor, especially at the narrow-band level.

While the empirically based classification approaches have some limitations, they do provide a functional framework from which to organize a sound, school-based, classification system that differentiates among referred students' primary social-emotional problems and that facilitates a link between assessment and intervention. This has been demonstrated in Iowa, which applied the outcomes from empirically based classification research into a state special education definition and approach for behaviorally disordered students that recognized four clusters of such students, the developmental and situational nature of their problems, the importance of problem solving and FBA, and the need for intervention-based services. While any ED definition and empirically based assessment approach needs further operationalization at the school and school psychological level, this approach to classification offers some distinct advantages over the DSM and IDEA-exclusive approaches to both personality assessment. Integrating FBA, an ecological perspective, comprehensive problem solving, and empirically based classification increases the potential for the most effective services for referred and identified students.

BEST PRACTICES IN PERSONALITY ASSESSMENT

Given the discussions above, five pragmatic beliefs are essential to a best practices approach to personality assessment. These beliefs, critical both to the conceptualization and operationalization of the assessment process, involve what follows:

1. The need for an ecological/environmental orientation to personality assessment suggests that referred students are best understood by investigating the family, school, and community systems in which they grew up and now with which they interact. In most cases, these systems have determined and/or influenced referred students' developmental progress, and analyses of the interdependent relationships between these systems and students may explain certain behaviors, affects, and interactions of concern. Clearly, a child's anxious or phobic behavior toward school is best understood when it is known that the child has been corporally punished and embarrassed in full view of his or her peer group for forgetting to bring in homework. Similarly, a child who never attended preschool and has been in four different kindergartens and first grades owing to frequent moves may never have learned appropriate play or socialization behavior. The ecological/environmental assessment helps to efficiently explain many referred problems while decreasing the tendency to assume that the child should be the exclusive focus of the assessment process. This perspective also increases the probability that the ecological/environmental contingencies that explain referred problems are recognized and directly addressed with appropriate intervention approaches.

2. The need for multimethod, multisource, multisetting assessments suggests that the identification and analysis of referred problems are more accurate when the assessment procedures used involve multiple techniques and approaches from multiple informants who have interacted with the referred student in multiple situations and settings (Gresham, 1983). This process minimizes diagnostic and analytical errors and poorly developed intervention programs that have occurred because (a) only one assessment technique was used (e.g., a projective test) to the exclusion of a more comprehensive assessment battery (e.g., behavioral observations plus behavior rating scales plus home and school interviews plus appropriate developmental scales); (b) only one assessment source (e.g., the mother) was used, when multiple sources might indicate that the mother has excessively high expectations for the child; and/or (c) the child was evaluated in only one setting, when a multiple setting evaluation might indicate that the child experienced a traumatic event in a different setting and generalized the emotional response across settings. While some problems are legitimately related to specific individuals or settings, the multimethod, multisource, multisetting process increases assessment and intervention reliability and validity while assuring the ecological/environmental considerations described above.

3. The need for a developmental context to assessment suggests that school psychologists must be knowledgeable and sensitive to the typical and atypical developmental characteristics that occur for the independent variables of age, gender, multicultural status, and socioeconomic status, and that all personality assessment data be analyzed and interpreted from this perspective. For example, it makes no sense to interpret projective drawings as "psychologically significant" when a child has obvious visual-motor deficiencies or when developmental norms for certain-aged students indicate that they cannot form meaningful, interactive, figures in their drawings. It is also somewhat dangerous for school psychologists to depend on their own, or others', subjective interpretations of *any* assessment method if no sound empirical base exists to guide and support those conclusions. Finally, it is important to consider referred children's cognitive-developmental status when interpreting any personality assessment data gathered directly or indirectly. Clearly, a mildly retarded child's social skills and emotional reaction to frustration may be closely related to his or her cognitive skills and developmental status. In

this context, it is important to note that much of the projective drawing literature depends on clinically based, rather than empirically based, studies and case examples (Knoff, 2001). While projective drawings may provide insight into a student's behavioral cognitions and belief systems, their results can only be interpreted as *hypotheses* that are in need of objective and multimodal validation. In contrast, even though a common set of narrow-band scales were created, the various Achenbach (1991) behavior rating scales have been factor analyzed across age and gender, and the problems scales are scored separately by gender and age (4–11 and 12–18).

4. The need for a problem-solving and hypothesis-testing approach to assessment suggests that the personality assessment process should systematically involve a problem identification, problem analysis, intervention, and evaluation sequence so that problems are accurately (and ecologically) identified and then comprehensively analyzed (using multimethod, multisource, multisetting assessments) *before* any intervention is attempted. This process explicitly and logically links assessment results with intervention programs, and ensures that these programs are not implemented until an explanation as to *why* a referred problem or situation is occurring has been found. Inherent in this process is the belief that changes in students' educational settings or placements are needed only if intervention programs in the regular classroom (with "pull-in" resources if needed) are not successful. Moreover, personality assessment is completed to answer specific questions and not to describe or identify student pathology or to affix labels to unnecessary diagnoses.

5. The need for objective and observable assessment strategies emphasizes that all assessment hypotheses must be validated objectively and, ideally, through observable means. While objectivity is clearly relative, school psychologists must use instruments and techniques that have demonstrated their ability to validly and reliably generate the desired data and information. Thus, the psychometric properties of all personality assessment instruments must be investigated on an ongoing basis, and only the most sound instruments should be used among those that advertise similar assessment purposes or domains. Beyond objectivity, comprehensive behavioral observation is still the best way to assess the presence of specific social-emotional skills or deficits. Behavioral observation requires a clear operationalization of targeted skills or deficits, and the results include the frequency, intensity, and duration of a referred student's behavior and the antecedent, consequent, and ecological conditions that occur when these behaviors are exhibited. Collecting accurate and useful data through behavioral observation requires training, organization, and practice. It is a learned skill. But when done effectively, behavioral observation becomes the cornerstone of any personality assessment, and the source of the objective data that can confirm or reject many important hypotheses about a referred student.

The Referral Question Consultation Process

Rather than describing the various personality assessment approaches, tools, and techniques in a somewhat random, categorical, form, this section will discuss the assessment process from the beginning to the end using the Referral Question Consultation (RQC) process (Knoff & Batsche, 1991a). Assumed throughout this entire discussion are the beliefs that school psychologists have the professional training and autonomy to determine what personality assessment procedures are necessary for any ED (or related) referral; that school psychologists ultimately identify and implement intervention programs that offer the highest probability of treatment success; and that service delivery is provided within the context of consultee acceptability, social validity, treatment integrity, and transfer of training and generalization. While some states and school districts require the completion of certain personality assessment techniques (e.g., projective tests) with any ED referral *regardless* of the circumstances surrounding the referral, this is *not* a best practices approach. Personality assessment is an individualized process that should be fully in the hands of the professional school psychologist, and the requirement that certain techniques be used is personally and professionally appalling and potentially unwise or even damaging to the referred student.

The RQC process involves 10 interdependent steps after an individual student has been referred.

1. Review all existing data available on the referred student and collect any additional background data as appropriate.
2. Meet with the referral source in a *consultative interview* to behaviorally define his or her initial concerns, to identify the need for additional data to finalize the behavioral operationalization of these concerns, to initiate the functional assessment process and informally test some initial hypotheses, and to determine the referral source's assessment goals and commitment to the RQC process and classroom-based interventions if appropriate.
3. Develop hypotheses to explain the initial concerns as behaviorally operationalized.
4. Develop prediction statements from the generated hypotheses.
5. Develop data-based referral questions that will guide the assessment process and confirm or reject the generated hypotheses.
6. Select multi-trait, multi-method assessment procedures that will specifically answer the referral questions, continue the functional assessment process, and facilitate the link between assessment and intervention.
7. Apply the assessment and background data so as to answer the referral questions and to confirm or reject the generated hypotheses.
8. Select and implement intervention strategies consistent with those hypotheses that have been confirmed.
9. Monitor change in the area of the initial concern to determine the impact of the intervention.
10. Develop a written report that documents the RQC process, the interventions tried, and the intervention outcomes as they relate to the resolution of the initial, referred concerns.

Review of the Data

When a school psychologist receives a referral from a teacher, the first step in the RQC process is to review essential information about the referred student and to collect any additional background data that may be important to know before interviewing the teacher. The review of essential information typically centers around an analysis of five possible existing student areas or "folders": (a) the student's cumulative folder; (b) the student's health and attendance folder; (c) the administrative/ discipline folder; (d) relevant teachers' academic portfolio, running record, authentic assessment, and work sample folders; and (e) the special education/remedial education (e.g., Title I/Chapter I) folder. In addition to the information available in already-existing records and student folders, it may be time- and cost-efficient to collect other data from teachers and other sources (e.g., parents and significant others) prior to an initial consultation interview. This information may be collected through behavior checklists, behavior rating scales, ecological or developmental status surveys or questionnaires, or objective personality scales or inventories; and it may provide the answers to routine developmental (and other) status questions so that precious interview time can focus on the areas most relevant to the referral concerns. Significantly, this information also may facilitate a more accurate and in-depth behavioral operationalization of the teacher's initial concerns, identify possible correlates of those concerns, identify possible student assets and strengths, and generally prepare the school psychologist more thoroughly for the consultation interview and the teacher's (and others') perception of the referral problem.

BEHAVIOR RATING SCALES

Behavior rating scales are one of the most efficient, sound, and effective ways to identify a referred student's behavioral strengths and weaknesses, to validate a referral source's initial concerns, to evaluate the severity of a wide range of specific behaviors, to assess for atypical patterns of behaviors or clinical entities, and to complete one facet of a multisource, multisetting evaluation. With hundreds of rating scales on the market, school psychologists' ability to choose the rating scales that will best accomplish their assessment goals without sacrificing psychometric quality is critical. To that end, Edelbrock (1983) noted that behavior rating scales differ dramatically across a number of critical dimensions, and he provided the following suggestions to help school psychologists become better behavior rating scale consumers:

1. School psychologists need to match their RQC and assessment goals to the results that a particular behavior rating scale actually provides. Some behavior rating scales (a) assess clinical, home, and/or school concerns; (b) are descriptive, prescriptive, or diagnostic; (c) evaluate specific behaviors or simply provide a checklist indication that they exist; (d) are unidimensional or multidimensional in scope; (e) rate actual student behaviors or characteristics that correlate with certain behavioral conditions; and (f) focus exclusively on behavioral deficits or problems, while others assess both behavioral deficits and assets. School psychologists must consider these rating scale characteristics, the referred problem, and the diagnostic and intervention questions to be answered. Clearly, behavior rating scales must be chosen in an informed manner with due consideration of their purposes and intended uses.

2. School psychologists need to recognize that behavior rating scales' technical adequacy vary greatly and need to be analyzed prior to their use. Among the variables to evaluate are (a) how items were selected during the development of the behavior rating scale, (b) what response scaling approach was used (e.g., "true/false," "often/sometimes/never"), (c) how the scale was developed and constructed, (d) the scale's standardization and norming procedures, and (e) the scale's validity and reliability data.

3. School psychologists need to evaluate whether behavior rating scales evaluate global or specific levels of manifested behavior, the time frames within which referred students are evaluated (e.g., 1, 3, or 6 months), and who the optimal respondent should be. To clarify this latter point, some behavior rating scales require that the informant be the referred student's mother or teacher. Other rating scales are completed simply by an individual who genuinely knows the student or who has interacted with the student over a long period.

4. Finally, school psychologists must assess how behavior rating scales control for response bias, for example, for halo effects, leniency or severity effects, and/or central tendency or range restriction effects. Without sufficient controls for bias, a behavior rating scale's results are of extremely limited use.

From an RQC perspective, school psychologists must strategically use all of the potential information generated by a behavior rating scale. School psychologists also must recognize that behavior rating scales measure *the perceptions of the scale's respondent* and that these perceptions must be validated. Finally, and too often, school psychologists simply use the broad- and narrow-band results of a behavior rating scale concluding and writing in their personality assessment reports, for example, that a referred child "has significantly high externalizing or acting-out tendencies, and that he manifests hyperactive, aggressive, and delinquent behavior" by virtue of elevated scores on those scales. Unfortunately, conclusions such as these are simplistic at best and downright inaccurate and damaging at worst. A best practices approach to behavior rating scale interpretation (a) begins at the individual item level to determine what specific behaviors and/or behavioral correlates are of greatest concern to the scale respondent; (b) continues at the narrow-band scale level, first to determine if the significant items are consistent with the label of the specific scale that contains them, and then to determine if the scale's scores indicate a statistical or clinical problem; and (c) ends at the broad-band scale level where the most global interpretations of a referred student's behavior are considered. Significantly, the data generated in this manner are compared with other information at this first step of the RQC process and then integrated into the consultation interview for further confirmation and analysis.

OBJECTIVE PERSONALITY SCALES

Objective personality assessment scales assess specific diagnostic areas (e.g., self-concept, anxiety, depression) or multidimensional areas of referred children's personality functioning. At this RQC stage, it may be best to use the latter type of objective scale so that a broad range of psychological problems or concerns can be sampled for later, more in-depth investigation. Currently, a number of multidimensional objective scales are available, including the Personality Inventory for Children and for Youth, the Children's Personality Questionnaire, the Early School and High School Personality Questionnaires, the Minnesota Multiphasic Personality Inventory-Adolescents, and the Millon Adolescent Personality Inventory. The Personality Inventory for Children, for example, has 12 clinical scales focusing on Achievement, Intellectual Screening, Development, Somatic Concerns, Depression, Family Relations, Delinquency, Withdrawal, Anxiety, Psychosis, Hyperactivity, and Social Skills, all of which can stand alone as separate clinical entities.

Like behavior rating scales, the development and psychometric properties of all objective scales must be investigated, and only those scales that have clinical (as opposed to research) validation and utility should be used. Also, like the behavior rating scales, analyses of individual items on these instruments, as opposed to unconditional acceptances of scale and profile results, are more likely to facilitate the development of effective interview questions and hypotheses for later validation through the RQC process.

The Consultative Interview

The consultation interview(s), involving those individuals referring and relevant to a specific child, is the most important activity in the RQC process. While the long-term impact of the consultation interview focuses on intervention planning and implementation, the interview has a number of goals as the second step of the RQC process:

1. To engage the teacher (and/or parents) in the comprehensive problem-solving process such that they are committed to the entire process and to the service delivery directions that result from the process.
2. To obtain additional relevant information beyond that already collected during the Review of Data step and to integrate and apply all of the data to the next steps of the RQC process.
3. To use all the data collected to clarify the initial concerns of the referral source resulting in a behavioral definition and operationalization of the behavior(s) of concern.
4. To determine what interventions have already been attempted and to evaluate the treatment integrity and impact of those interventions.
5. To initiate/continue the functional assessment process by asking some or all of the problem analysis questions noted earlier in this chapter.
6. To begin to generate tentative hypotheses that explain the clarified concern and to outline the remainder of the RQC assessment process for the consultee.

Armed with the teacher- and parent-completed referral and background information forms, behavior rating scales, and objective rating scales, the school psychologist can begin the diagnostic interview process at a much higher level of sophistication than when starting the process with a simple statement of concern. In fact, with the social, behavioral, developmental, educational, behavioral, and familial history of the student already documented by both teachers and parents, a great many background questions are unnecessary, and the school psychologist need only pursue those questions that are directly or indirectly related to the referral problem. Thus, the school psychologist now can listen to teachers' and parents' descriptions of the referral problem, match them to the behavior and objective rating scale data that has already been completed, behaviorally define and operationalize the stated problems and the behavioral ecology where they exist, and begin to generate hypotheses that explain the referred behavior or situation.

Development of Hypotheses

After completing the needed consultation interviews and collecting the necessary relevant information, the RQC process proceeds to the development of hypotheses that explain the now-clarified and behaviorally operationalized referral concerns. At this point in the process, the school psychologist and others have a great deal of information about the referred behavior, about the settings within which this behavior occurs, and about other significant ecological environments and contexts that are related to the referred student and the referral situation. Now, it is time to integrate all of this information and generate hypotheses that answer the question, *Why is this referral situation happening?* These hypotheses are generated by using the variables and conditions in Table 1 (adapted from Batsche & Knoff, 1995), and they conform to the principle that hypotheses must be relevant, predictive, and measurable.

Development of Predictions

The next step in the RQC process is the development of predictions. Predictions are statements, developed from specific hypotheses, that identify what should or should not happen if a hypothesis is true or untrue,

Table 1. Conditions that relate directly/indirectly to student learning

1. Child characteristics/conditions

Cognitive areas
- Adequate/inadequate short and long-term memory (auditory, visual)
- Length of attention span
- Self-monitoring and self-management skills
- Self-control/impulsivity (ability/inability to delay long enough to think/behave)
- Ability/inability to integrate visual/motor/auditory tasks
- Presence/absence of prerequisite academic skills for task
- Cognitive/metacognitive ability and skills

Behavioral areas
- Self-control and self-management skills
- Attributions, beliefs, expectations, attitudes
- Social skills (interpersonal, problem-solving, conflict resolution skills)
- Adaptive behavior skills
- Academic engagement

Health areas
- Hearing, motor, vision skills
- Presence of specific health conditions
- Physical and motor (fine and gross) capacity
- Medication cycle not appropriate for school day/activities
- Side effects of medication
- Speech/language difficulties
- Metabolism
- Fatigue/persistence resulting in higher activity, less ability to focus, etc.

Other
- Excessive absences or moves
- Lack of sensory stimulation during early childhood
- Language other than English

2. Peer characteristics/conditions

- Degree of cohesion between students relative to sharing common interests, values, and goals
- Peers support/reinforcement of appropriate/inappropriate behavior
- Peers providing/not providing appropriate/adequate models
- Social/academic skills of peers significantly higher (lower) than referred student
- Peer influence over student's appropriate/inappropriate behavior (e.g., supporting versus taunting and instigating)
- Expectations/values of peer group that influence student

3. Curriculum characteristics/conditions

- Curriculum too easy or difficult
- Curriculum relevant/not relevant to child experiences/understanding
- Curriculum flexible/inflexible in its ability to be adapted to students' learning styles or individual needs
- Curriculum presented in a way that relates to child strengths/weaknesses (lecture/auditory, etc.)
- Curriculum presented too fast or slow for student learning rate
- Sufficient/insufficient opportunity to practice skills

(Table continues on the following page.)

Table 1. (continued)

- Length of curriculum assignments too long/too short for attention/concentration skills of student
- Philosophy of curriculum presentation too narrow or broad (e.g., phonics only)
- Curriculum empirically based or not relative to student learning outcomes

4. Teacher characteristics/conditions

- Teacher expectations too high/too low for skills of student
- Feedback to student frequent/not frequent enough
- Rate of reinforcement too high/too low for student needs
- Presence/absence of assessment as an integral component of instruction
- Student and teacher physically too far apart or too close
- Sufficient/insufficient rehearsal time, direct instruction time, teacher guided practice
- Teacher energy, fatigue, or tolerance resulting in higher positive/negative or more/less frequent feedback and interaction
- Teacher familiar/unfamiliar or experienced/inexperienced with curricular methods necessary for child
- Level of supervision (frequency/rate) too high/low for student needs
- Teacher teaching style related to child strength or weakness areas

5. Classroom/school/district characteristics/conditions

- Classroom seating arrangement fosters problems (too close/near to peers, too far from/close to teacher, near window or distractions, etc.)
- Rules/expectations in class/building far exceed skills of student to be successful
- Presence/absence of a school-wide discipline approach
- School and staff (staff to student) ratio
- Sufficient/insufficient school materials (books, labs, other learning resources)
- Satisfactory/unsatisfactory professional development programs for staff
- Areas in building that are supervised adequately/inadequately
- Consistent/inconsistent discipline programs/philosophies/differences between staff who interact with students
- Temperature of building/classrooms
- Schedule of the daily activities
- Bus ride (length, problems on bus carry over to school, etc.)

6. Family/neighborhood/community characteristics/conditions

- Parent discipline adequate/inadequate (e.g., too severe/passive, teaches child prosocial or aggressive strategies)
- Presence of conflict/physical aggression between parents/guardians
- Presence/absence of appropriate/inappropriate levels of parent supervision
- Parents support/non-support of homework completion
- Discrepancy in values/expectations between home/school
- Parent academic skills adequate/inadequate to help child
- Reading and related academic and appropriate extracurricular activities present/absent in or supported by the home
- Parent difficulties (substance abuse, etc.) result in inconsistent parenting, low levels of supervision, negativity
- Parent able/unable or willing/unwilling to reinforce school-related academic/behavior strategies in the home
- Parent expectations too high/too low for child along with too much/too little pressure
- Parent willing/unwilling or able/unable to meet health/nutrition/basic needs of child resulting in potential school absences, tardiness, ability of child to concentrate on school tasks, etc.
- Parent supervision of student relative to the presence/absence of appropriate/inappropriate adults/peers in community, neighborhood, and home settings

respectively. For example, if we hypothesize that *A child aggresses because his peers verbally taunt him*, then our prediction statements would be *When peers verbally taunt the child, then the child will aggress against the peers* and *When peers do not verbally taunt the child, then the child will not aggress against the peers.*

Prediction statements are set up to evaluate the hypothesis *and its converse*. That is, it is necessary to demonstrate that the referral concern exists when our explanatory hypothesis is true, and it is also necessary to demonstrate that the concern *does not exist* in the absence of our hypothesis. For example, given the example above, we need to demonstrate that the child aggresses only when his peers verbally taunt him. If he aggresses when the peers ignore him, then our hypothesis is not true in that the verbal taunting is not consistently related to an aggressive response.

Another important point about predictions is that they must be evaluated without changing the student's "natural" environment whenever possible. That is, predictions should be tested, as much as possible, without implementing new interventions and, thus, without changing the referral setting. If a student, for example, is referred because he is out of his seat a great deal of the time, and your hypothesis is that he gets out of his seat during unstructured times in the classroom, then your prediction statements would say that *When unstructured time occurs in the classroom, then the student will get out of his seat* and *When structured time occurs in the classroom, then the student will stay in his seat*. To evaluate these prediction statements in a naturally occurring way, we would need to observe during times when the teacher routinely allows the classroom to be structured and unstructured, respectively. If we asked the teacher to artificially plan special structured and unstructured times, then this would constitute an intervention that changes the normally occurring classroom routine. When such changes occur, in the absence of baseline data and a multiple baseline or reversal research design, we cannot truly be sure whether the referred student's behavior is a function of the classroom structure (or lack of structure) or the change in the classroom routine.

Technically, this is the difference between a functional behavioral *assessment* and a functional behavioral *analysis*. The former is completed under naturally occurring conditions in the behavioral ecology. The latter involves some manipulation of the environment in order to test a specific and hypothesized contingency between two events (Tilly et al., 1998).

Development of Referral Questions

Referral questions are data-based questions, derived from the prediction statements, that quantitatively confirm or reject the original hypotheses related to a referral concern. More specifically, referral questions are typically yes or no questions, or questions related to frequency, duration, latency, or intensity. Referral questions are important for a number of reasons. First, referral questions actually drive the assessment and decision-making process. While assessment procedures must be reliable, valid, and psychometrically sound, the form and format of the referral questions actually determine what assessment methodologies must be used. Second, referral questions provide an internal check for the RQC process to insure that the parents' or teachers' referral concerns still are being addressed. Third, referral questions help to organize the report writing process. In fact, reports documenting the confirmation of hypotheses, the development of interventions, and the successful results of those interventions can be structured in a question-and-answer format around the referral questions. Thus, reports should do more than describe the referred student, they should answer questions that lead to and relate to interventions.

To write effective and appropriate referral questions, they must have the following characteristics:

1. Referral questions must be clearly defined, they must be directly related to the previous prediction statements, and they must require data that are observable and measurable.

2. Referral questions must be agreed upon by the referral source and other evaluation team members, and they must lead to or have the potential to lead to interventions, not labels.

3. Referral questions should result in clear, definitive answers regardless of whether they are testing causal or correlational relationships. Ideally, referral questions should be answered in a "yes" or "no" or other data-based format, and they should be able to directly confirm or reject hypotheses generated to explain the referred problem.

Given the scenario above relative to the aggressive child, the referral questions should be:

1. Do the peers verbally taunt the child? (Yes or No?)

2. Is the child aggressive with the peers? (Yes or No?)

3. Do the peers ignore or leave the child alone? (Yes or No?)

4. Is the child aggressive with the peers? (Yes or No?)

To confirm the hypothesis in this situation, questions 1, 2, and 3 would have to be answered "yes," and question 4 would have to be answered "no."

Once referral questions are developed, assessment begins. It is important to note that *only those assessment instruments and processes* needed to answer the referral questions are necessary. This discourages the random use of personality assessment tools in a "search for pathology," and it makes the RQC process both efficient and effective. In this context, most RQC referral questions will be answered jointly by the school psychologist and the classroom teacher, and they will most likely involve direct assessment *in the setting where the referred student's behavior or problem is occurring*. These assessments involve low inference procedures (e.g., the use of behavioral observation), they use multi-trait, multi-method assessment procedures, and they directly link assessment and intervention.

Briefly, there are four behavioral observation approaches commonly noted in the literature (O'Neill et al., 1997): naturalistic free behavior, naturalistic role play, analog free behavior, and analog role play observations.

Naturalistic observation involves observing referred students in the actual settings where their behaviors of concern and/or the conditions that most influence those behaviors are exhibited. When used to confirm hypotheses generated to explain well-identified behaviors, naturalistic observations are both time- or cost-efficient. In addition, they are the most ecologically sound of the behavioral approaches, and they are the least inferential relative to interpretation within the personality assessment context.

Analog observation involves observing referred students in controlled situations that simulate particular environments or circumstances of behavioral concern. These situations are used to objectively evaluate *a priori* hypotheses that explain referred behaviors or situations and to provide detailed and comprehensive functional analyses of significant facets of a referred student's behavior. Significantly, analog observations attempt to maximize the ecological accuracy of simulated situations so that interpretation requires as little inference as possible. They are also very time-efficient given their intent to elicit behaviors that test the referral-related hypotheses.

Free behavior observations occur when referred students are allowed to freely react and interact within environments that are either unmanipulated and naturalistic or simulated and analog. No artificial rules or constraints are placed on the students, and they respond to situations in any way that they choose.

Role play observations occur as referred students are requested to follow pre-conceived and semi-structured scripts that focus on interactions or situations relevant to particular hypotheses. These observations involve more inference than free behavior observations, because the student's role played behavior is assumed to represent behavior that would be exhibited if the situation actually occurred in a real-life situation. Once again, role play observations can occur in both naturalistic or classroom-based settings and analog or simulated settings; and naturalistic observations are assumed to require less interpretive inference than analog observations.

While behavioral observations may appear to be the easiest and most objective of all personality assessment approaches, they actually involve very complex processes. Beyond choosing which observation approach to use, school psychologists still must decide which recording method to use (e.g., narrative, interval, event, ratings) and how to best assess the antecedent conditions, environmental characteristics and interactions, overt and covert contingencies, planned and unplanned consequent conditions, and unintended effects of a referred behavior within its unique ecology. Though one of the most effective ways to validate hypotheses generated during the problem identification phase of the personality assessment process, behavioral observation also can be misused or abused. School psychologists must recognize that it is a learned skill that requires training, practice, and more practice.

Once data are collected, then the referral questions can be answered, and the original hypotheses can be confirmed or rejected. At this point, the multidisciplinary team can take the confirmed hypotheses, begin to develop intervention plans, and outline a formative report organized around the hypotheses tested, the referral questions generated, and the data collected.

OTHER ASSESSMENT TECHNIQUES

Beyond behavioral observation, there are a number of other personality techniques that can be used during the assessment process to answer specific RQC questions: for example, objective personality assessment techniques that focus on single diagnostic dimensions when needed (e.g., self-concept, anxiety, depression) and family assessment techniques. Projective instruments, to a large degree, *cannot* validate *a priori* hypotheses; and they only generate additional hypotheses that need subsequent validation, and thus, are only useful (if at all) in the earliest stages of the RQC process. The reader is strongly encouraged to read Knoff's (1993, 2001) research review and analyses of projective drawing approaches. The primary conclusions from these reviews are that projective instruments do not have sufficient empirical validation for clinical use, that they are both time- and cost-inefficient, and that their use necessitates additional assessments to validate their assertions.

A BRIEF RQC CASE STUDY

To quickly illustrate the RQC process in action, let us consider a fourth-grade male student (Jason) who has been referred by his regular classroom teacher because of a number of incidents where he becomes verbally angry, pushes his desk violently away from himself and toward other students, and refuses to calm down and follow teacher directions. Typically, we would behaviorally operationalize this problem in more specific detail by completing a series of consultative interviews, by some classroom observations, and, perhaps, by having the teacher complete a behavior rating scale or two. But, for the purposes of this example, let us just generate one hypothesis in each of the six hypothesis areas that conform to Figure 1 that potentially explain this behavior. Putting these hypotheses in the recommended format, we would say that Jason becomes verbally angry, pushes his desk violently away from himself and toward other students, and refuses to calm down and follow teacher directions *because*:

1. *Family-oriented hypothesis*: He sees his father respond similarly to his mother when she asks him to do something around the house.

2. *Classroom-oriented hypothesis*: There is so much noise in the classroom that he can't attend to and complete his work.

3. *Teacher-oriented hypothesis*: The teacher constantly orders him around giving him five negative comments for every one positive comment.

4. *Curriculum-oriented hypothesis*: His mathematics text and assignments are above his instructional level.

5. *Peer-oriented hypothesis*: His peers reinforce him with attention and laughter each time this occurs.

6. *Student-oriented hypothesis*: He forgets to use the "stop and think" steps of his prosocial skills/problem-solving self-management intervention.

At this point, we would generate prediction statements and referral questions for each of these hypotheses, and then proceed to collect the data to confirm or reject each hypothesis. Continuing our example for just one of the hypotheses above, we would say that

7. *Curriculum-oriented predictions*: *When* Jason's mathematics assignments are above his instructional level, *then* he will become verbally angry, push his desk violently away from himself and toward other students, and refuse to calm down and follow teacher directions. *Conversely, when* Jason's mathematics assignments are at his instructional level, *then* he will not become verbally angry, push his desk violently away from himself and toward other students, or refuse to calm down and follow teacher directions.

The data-based *referral questions* needed to assess this hypothesis, drawn from the prediction statements, include

1. Are Jason's mathematics assignments above his instructional level?

2. Does Jason become verbally angry, push his desk violently away from himself and toward other students, and refuse to calm down and follow teacher directions?

At this point, the school psychologist and/or the teacher can collect the data to answer these questions (a) through an assessment of the instructional level of Jason's math assignments over time and (b) through observations of Jason's behavior during math. If the data demonstrate that Jason acts out when math assignments are above his instructional level, but does not act out, is calm, and appropriately follows teacher directions when math assignments are at his instructional level, then the hypothesis has been confirmed. If the data do not support one or both of these situations, then the hypothesis should be rejected. For the confirmed hypothesis, the intervention program would focus on (a) ensuring that current math assignments are at Jason's instructional level, (b) working with Jason to increase his mathematics skill and confidence levels such that he progresses more successfully through the math curriculum's goals and objectives, and/or (c) teaching Jason coping skills such that he is able to more adaptively handle the academic and personal frustration that occurs when he receives a mathematics assignment above his instructional level. If the hypothesis is rejected, then another hypothesis must be generated, assessed, and validated; that is, intervention programs cannot be developed without one or more confirmed hypotheses.

SUMMARY

Personality assessment is most effective when referred problems are comprehensively identified and analyzed from an ecological, developmental, and environmental perspective using a hypothesis-testing, problem-solving process where hypotheses are evaluated using objective, multimethod, multisource, multisetting methods. Once accomplished, school psychologists then are ready to develop effective intervention programs. Intervention should be clearly linked to the assessment process, the referral concerns identified and confirmed by the personality and behavioral assessments, and the factors that interact and influence the referral concerns. As was noted earlier, intervention is useless unless viable, acceptable, and socially valid approaches are successfully implemented with ongoing attention to treatment integrity and treatment evaluation. In the end, the success of the personality assessment process will be evaluated most clearly on the behavioral and treatment changes resulting from the intervention program.

To summarize, personality assessment is a process, not a product. It is simply not enough to *describe* or even *understand* a child's behavioral or social-emotional problems. School psychologists must move from problem analysis to interventions that resolve these problems and that facilitate children's normal development and positive mental health. This chapter has been dedicated to this ultimate best practice. It is hoped that we will soon see the day when school psychologists provide comprehensive services, when intervention success is valued over special education placement, and when social, emotional, and behavioral success is an explicit educational goal and emphasis in every classroom.

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An introductory manual to the RQC process, which utilizes a systematic problem-solving process to address referred problems. By using consultation processes as a foundation, this process ensures a direct link between case-related assessment and intervention by generating hypotheses that explain the referred behavior, confirming behavioral predictions based on these hypotheses, and developing interventions that address these behavioral explanations. This manual describes this decision-making process and relates it to use by support teams, team reports, and triennial re-evaluations. It also provides a step-by-step teaching of the RQC process complete with numerous case examples and practice exercises to facilitate reader mastery.

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A critical chapter in an important edited volume devoted to personality assessment and sound clinical and school practice. The chapter reviews all of the current research on projective drawings and concludes that much of the "evidence" is provided through case studies or research that has serious methodological flaws. Projective drawings are put into a problem-solving context that suggests limiting their use while increasing their accountability—for those who still want to use them. While the debate on projectives rages on, this chapter provides an objective and empirical perspective in the midst of the storm.

O'Neill, R. E., Horner, R. H., Albin, R. W., Sprague, J. R., Storey, K., & Newton, J. S. (1997). ***Functional assessment and program development for problem behavior: A practical handbook***. Pacific Grove, CA: Brooks/Cole. Very practical book that provides comprehensive, step-by-step, approaches and strategies for completing FBA of students with problem behaviors. The book contains a number of pragmatic forms that can be used during a FBA and that can be applied to educational settings. In addition, discussions are presented to help the assessment to intervention process relative to the development of behavior support plans.

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81 Best Practices in Multidimensional Assessment of Emotional or Behavioral Disorders

Stephanie H. McConaughy
University of Vermont
David R. Ritter
Burlington (Vermont) School District

OVERVIEW

When the district school psychologist read the referral for evaluation, it was clear that the student's classroom behavior warranted concern. Teachers reported that the student's moods and behavior seemed unpredictable from day to day. On "good" days, the student seemed generally happy, but often clowned around and disrupted class activities. Other days, the student came into school looking angry and sullen and sometimes depressed. When asked to do school work on the "bad" days, the student became defiant and disrespectful or simply shut down and refused to do anything. The student was often sent out of class as a disciplinary procedure. As a result, the student missed instruction and was falling behind in academic performance. On the playground, the student frequently fought with others, though it was not always clear who initiated the fights. The student seemed to have no real friends. The student's behavior was understandably disturbing to teachers. The school psychologist was aware that many regular education teachers feel that they lack the necessary skills and training to cope with such problems (Kauffman & Wong, 1991; Scruggs & Mastropieri, 1996). The school psychologist also knew how important it was to identify emotional and behavioral problems early before they become irreversible (Walker et al., 1998).

In formulating an assessment plan, the school psychologist considered four perspectives on emotional or behavioral disorders. One perspective views *child psychopathology* as the basis for a disorder. This viewpoint seeks to identify emotional and behavioral problems that are symptoms or characteristics of psychopathology. This perspective uses a classification system to describe and label different patterns of problems exhibited by the child. It also acknowledges that familial and environmental factors may contribute to the development of child psychopathology. Examples are mental illness in a parent, parental alcohol or drug abuse, low socioeconomic status, life stress, and divorce (Jensen, Bloedau, Degroot, Ussery, & Davis, 1990).

A second perspective focuses on *behavioral-environmental interactions* as the basis for disorder. Instead of identifying symptoms or characteristics of psychopathology in the child, this perspective emphasizes reciprocal interactions between the child's behavior and the environment (Bandura, 1986). Behavioral excesses or deficits are then thought to constitute emotional or behavioral disorders. This viewpoint considers family factors as well, but from a different angle, such as incompatibility between parents' and children's interactional styles, parents' maladaptive reactions to the needs or problems of children, and parents' attributions about intentionality, consequences, and circumstances surrounding behavior (Grotevant, McRoy, & Jenkins, 1988). Aspects of the school environment and interactions with teachers are equally important considerations within this perspective (Ysseldyke, Christenson, & Thurlow, 1987).

A third perspective seeks to identify the *functional relationship* between environmental events and problem behavior. This viewpoint is similar to the behavioral-environmental perspective. It assumes that behavior occurs within a context of antecedent and consequent events and that most behavior is a function of the reinforcing aspect of consequent events. The consequent events can provide either positive reinforcement (social attention or pleasant situations) or negative reinforcement (escape or avoidance of unpleasant situations). Functional behavioral assessment identifies the antecedent and consequent events surrounding problem behavior. Interventions are then designed to change reinforcing relationships to extinguish problem behavior and substitute desired behavior (see McComas, Hoch, & Mace, 2000; Knoster & McCurdy, this volume; Kratochwill, this volume).

Yet a fourth perspective emphasizes the *effectiveness of interventions* for emotional or behavioral disorders, directly linking assessment of problems to intervention planning (see Batsche, this volume). This viewpoint defines emotional or behavioral "disorders" by the extent to which the child's behavior proves to be resistant to interventions (Gresham, 1991).

In our case example, the school psychologist recognized that the four perspectives were not mutually exclusive. Each perspective needed to be considered in evaluating the referred student's problems and determining the extent to which such problems constituted a disorder. The school psychologist also recognized that the primary goals for assessment should be to identify students' needs and to assist in developing and implementing interventions when they are warranted (National Association of School Psychologists, 1993). To accomplish these general goals, school-based assessments of emotional and behavioral disorders can serve several purposes. These include:

1. Helping teachers to cope with behavior problems in regular education classrooms

2. Helping students to reduce their problems and improve their competencies

3. Determining whether a student is eligible for special education services

4. Referring children (and perhaps families) for mental health services outside of the school setting

Depending on the purposes of assessment, the school psychologist may emphasize each of the four perspectives to different degrees. To help teachers cope with classroom behavior problems, the behavioral-environmental interaction or intervention-focused perspectives are likely to offer the most effective strategies. In such cases, the school psychologist could employ behavioral consultation methods to determine specific excesses or deficits in the student's behavior (see Kratochwill, this volume; Zins, this volume). Specific antecedents and consequences of the problem behaviors would be identified. In consultation with teachers, the school psychologist could then evaluate the effectiveness of prior interventions and the feasibility of alternative interventions in the regular education setting. The behavioral-environmental interaction or intervention-focused perspectives are also likely to be effective for working directly with students to reduce their problems and improve their competencies and school performance. In such cases, the school psychologist may provide individual or group counseling to students as well as consult with teachers and parents. For these purposes, it is usually not necessary to label or classify a student's problems into categories.

Determining eligibility for special education services or Section 504 accommodations, on the other hand, often involves classifying students' problems according to categories of "disabilities," as defined in federal and state laws. Providing mental health services outside of school may also require classification of problems, for example, in order to obtain third-party insurance payments. Making appropriate classifications involves assessing the severity and patterning of problems, as well as considering environmental circumstances. Other chapters in this volume describe assessment best practices from the perspectives of behavioral-environmental interactions, functional relationships, and effectiveness of interventions. To assist school psychologists in assessment of child psychopathology, this chapter describes best practices for identifying and classifying patterns of children's emotional and behavioral problems. The following section covers basic considerations regarding classification systems. A subsequent section describes best practices for multidimensional assessment of emotional and behavioral disorders.

BASIC CONSIDERATIONS

Two different approaches have been taken toward classifying children's emotional or behavioral problems: categorical classification and empirically based taxonomies (Achenbach & McConaughy, 1997). Categorical systems classify problems in a *dichotomous* present versus absent fashion. In a categorical system, specific criteria are listed to describe features of a disorder. If all of the required features are met, an individual is judged to have the disorder. If all of the required features are not met, the individual is judged not to have the disorder.

In empirically based taxonomies, statistical procedures, such as principal components or factor analysis, are employed to derive "syndromes" or groupings of problems that tend to co-occur. Individuals are scored according to the *degree* to which they manifest a given problem. Rather than judging features as present or absent, problems are rated on quantitatively graded scales that represent frequency, duration, and/or intensity. Scores for each problem item are then summed to produce an overall score for the relevant syndrome. Standard scores derived from raw scores for each syndrome then indicate how high or severe an individual's score is compared to large normative samples. Standard scores can also be derived for total problems and broad groupings of internalizing problems (e.g., withdrawal, anxiety, and depression) and externalizing problems (e.g., aggressive and delinquent behavior).

Empirically based taxonomies and categorical classification systems are not incompatible. Scores on quantitative scales can be dichotomized to define normal versus clinical ranges. However, quantitative taxonomies do not assume that a particular syndrome represents a distinct or separate disorder. Instead, different patterns of problems are reflected in profiles of high and low scores across a set of syndromes. In this way, quantitative taxonomies provide a more differentiated method than categorical systems for assessing the severity and patterning of problems.

The DSM-IV Classification System

The American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition* (DSM-IV) (American Psychiatric Association, 1994) is one of the most widely used categorical systems for classifying adult and childhood psychopathology. The DSM-IV lists specific features, or symptoms, for some 40 numerically coded disorders of childhood and adolescence. Several adult disorders are also considered applicable to children. For each disorder, evaluators must judge whether the defining symptoms are present or absent over a specified time period (e.g., the past 6 months). They must also determine whether the symptoms produce functional impairment in relevant settings (e.g., home, school, or work), and they must rule out other diagnoses with similar symptoms. Children judged to meet the requisite number of symptoms and qualifying conditions are diagnosed as having a DSM-IV disorder. Common childhood diagnoses include conduct disorder (CD), oppositional defiant disorder (ODD), attention deficit hyperactivity disorder (ADHD), and separation anxiety disorder. Examples of adult diagnoses that can be applied to children include major depression, dysthymia (a chronic form of sad affect), obsessive compulsive disorder (OCD), generalized anxiety disorder, phobias (which can include school phobia), and schizophrenia.

While the DSM is commonly used to classify individuals for mental health services, it has questionable utility for special education and school psychological services (Gresham & Gansle, 1992). Moreover, DSM diagnoses are *not* required by federal law for determining eligibility for special education. However, DSM diagnoses do provide a descriptive system for communicating with mental health professionals and other non-school service providers. In addition, DSM diagnoses are usually required for third-party insurance reimbursement and other mental health administrative purposes. For these reasons, it is helpful for school psychologists to familiarize themselves with the current DSM-IV classification system.

Special Education Classification System

The Individuals with Disabilities Education Act (IDEA, P. L. 101-476, 1990; P. L. 105-17, 1997) represents another form of categorical classification. The IDEA defines 10 types of disability that can entitle children to special education services. The law describes general criteria for each disability area. Children with emotional or behavioral problems are most likely to qualify for special education under the IDEA category of emotional disturbance (ED), defined as follows:

(i) The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance:

A. An inability to learn which cannot be explained by intellectual, sensory, or other health factors;
B. An inability to build or maintain satisfactory interpersonal relationships with peers and teachers;
C. Inappropriate types of behavior or feelings under normal circumstances;
D. A general pervasive mood of unhappiness or depression;
E. A tendency to develop physical symptoms or fears associated with personal or school problems;

(ii) The term includes children who are schizophrenic. The term does not include children who are socially maladjusted unless it is determined that they have an emotional disturbance (20 U.S.C. § 1401 [a] [1]; 34 C.F.R § 300.7 [g]).

To meet the criteria for ED according to the above definition, a child must exhibit *one or more* of the five characteristics A through E *or* have a diagnosis of schizophrenia. In addition, *all three* qualifying conditions listed in paragraph (i) must apply to at least one of the identified characteristics. That is, the characteristic(s) must exist over *a long period of time*, *to a marked degree*, and *adversely affect educational performance*. A child exhibiting at least one of the five characteristics, or having a diagnosis of schizophrenia, and meeting all three qualifying conditions, is judged to have ED. A child who does not meet criteria for ED is judged to be ineligible for special education on the basis of emotional or behavioral disorders. Like the DSM-IV system, special education classification requires a categorical decision regarding the presence or absence of a given disability.

Professionals and advocacy groups have criticized the IDEA definition of ED as being overly restrictive and not supported by legal precedent or educational and clinical research (Forness, 1992; Skiba & Grizzle, 1992). In the early 1990s, a national coalition of mental health and special education professionals and advocacy groups launched an effort to substitute a new definition of "emotional or behavioral disorder (EBD)" for the IDEA definition of ED (*Federal Register*, 1993, Vol. 58, No. 26, p.7938). The National Association of School Psychologists endorsed the coalition's proposed definition (National Association of School Psychologists, 1993). However, after receiving public comments, Congress opted to retain the IDEA definition, but later removed the word "serious" from the label for the ED category. Many states have adopted the federal definition of ED, while other states have framed their own definitions modeled on the federal definition. A few states do not require categorical classifications for special education. In evaluating ED, school psychologists must follow the rules and regulations for their own particular state. In subsequent sections, we will use the federal definition of ED as a guideline for defining best practices for assessment of children's emotional and behavioral problems. However, for consistency, we will use the abbreviation "ED/EBD" to encompass all terms for emotional disturbance and emotional and behavioral disorders or disabilities.

Empirically Based Taxonomies

The Achenbach System of Empirically Based Assessment (ASEBA) provides a good example of an empirically based taxonomy (Achenbach, 1991a). The ASEBA includes the *Child Behavior Checklist* (CBCL) (Achenbach, 1991b) and its related forms. The CBCL is designed to obtain parents' ratings of emotional or behavioral problems of children aged 4–18. Parents rate their child on 118 problem items for how true the item is over the past 6 months. Each item is rated on a 3-point scale: 0 = not true (as far as you know); 1 = somewhat or sometimes true; and 2 = very true or often true. The *Teacher's Report Form* (TRF) (Achenbach, 1991c), covering ages 5–18, is a parallel form for obtaining teachers' rating of children's problems over the past 2 months. The *Youth Self-Report* (YSR) (Achenbach, 1991d), covering ages 11–18, is designed to obtain adolescents' ratings of their problems. The CBCL and YSR also include items for measuring social competencies, while the

TRF includes items for rating academic performance and school adaptive functioning. Other ASEBA forms are available for parent and teacher ratings of preschool children, direct observations in group settings, and child clinical interviews. (Forms for observations and child clinical interviews are discussed in later sections.)

The CBCL, TRF, and YSR are scored on profiles containing eight empirically based cross-informant syndrome scales: Withdrawn, Somatic Complaints, Anxious/Depressed, Thought Problems, Social Problems, Attention Problems, Delinquent Behavior, and Aggressive Behavior. The profiles also provide scores for higher-order groupings of Internalizing and Externalizing and Total Problems. In this taxonomic system, the names of the syndrome scales describe the problems they represent, and are not considered to be "diagnostic" labels. (For details of the derivation of syndromes, see Achenbach (1991a) and McConaughy (1993a)). Cut points for defining normal, borderline, and clinical range scores on the problem scales can be used for judging the severity of a child's reported problems relative to nationally representative normative samples.

Several other rating scales are also scored on empirically based syndromes for assessing children's emotional or behavioral problems. For example, the *Behavior Assessment System for Children* (BASC) (Reynolds & Kamphaus, 1992) is scored on 10 clinical syndromes: Aggression, Anxiety, Attention Problems, Atypicality, Conduct Problems, Depression, Hyperactivity, Learning Problems (teacher form only), Somatization, and Withdrawal. The BASC also contains four scales for assessing positive traits: Adaptability, Leadership, Social Skills, and Study Skills (teacher form only). The *Revised Behavior Problem Checklist* (RBPC) (Quay & Peterson, 1983) is scored on six syndromes: Anxiety-Withdrawal, Attention Problems-Immaturity, Motor Tension-Excess, Psychotic Behavior, Socialized Aggression, and Conduct Disorder. The *Walker Problem Behavior Identification Checklist* (WPBIC) (Walker, 1983) is scored on five syndromes: Acting Out, Distractibility, Disturbed Peer Relations, Immaturity, and Withdrawal. Other rating scales, such as the *Behavior Evaluation Scale-2* (BES-2) (McCarney & Leigh, 1990), provide quantitative scores for problems, but do not contain syndrome scales derived through empirically based procedures.

BEST PRACTICES FOR ASSESSMENT OF ED/EBD

Because school psychologists continue to have key roles in assessing ED/EBD to determine eligibility for special education, this type of assessment will be our primary focus. Assessment of ED/EBD as a defined disability is also relevant for accommodations under Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. § 706, 1996; § 504 [30 C.F.R Part 104]). A multidisciplinary team is required for special education and Section 504 evaluations. School psychologists are particularly well qualified to serve as members of multidisciplinary teams for assessing ED/EBD. (Other team members may include special educators, classroom teachers, speech/language pathologists, guidance counselors, parents, and other non-school professionals.) In practice, school psychologists often become involved with children exhibiting emotional or behavioral problems long before they are referred for evaluations. For example, a school psychologist may have already consulted with teachers to develop classroom interventions, or may have provided counseling to such children and their families. The school psychologist's role in assessment of ED/EBD may involve any or all of the following procedures:

1. Reviewing referral and screening information
2. Consulting with teachers and other school staff
3. Planning assessment procedures
4. Conducting screening and assessment procedures
5. Interpreting assessment data and preparing reports
6. Linking assessment data to intervention planning, implementation, and evaluation (National Association of School Psychologists, 1993)

Professional ethics require that all evaluators be familiar with the relevant instruments and procedures and select only those they can administer and interpret with confidence. It is especially important that evaluators understand the limits of reliability and validity of each instrument or procedure. Evaluators must be aware of the advantages and limitations of various assessment procedures and report their findings accordingly. Not all procedures are standardized, nor do they all produce quantifiable data. However, whenever possible, standardized instruments are preferable over non-standardized procedures. Standardized instruments should also be used in conjunction with non-standardized procedures. No single measure or procedure should be considered definitive in providing evidence of ED/EBD. Instead, determination of ED/EBD must be based on an integration of findings from a multidimensional assessment, as discussed below.

Multidimensional Assessment of ED/EBD

Children's behavior often varies from one setting to another, such as home versus school or one classroom versus another. Perspectives or judgments of children's behavior can also vary from one person to another. For these reasons, agreement between informants in different situations is likely to be moderate at best (Achenbach, McConaughy, & Howell, 1987). Differing perspectives about children's behavior do not mean that one informant is right and the other wrong. Instead, differing perspectives underscore the need for multiple information sources to assess children's functioning across settings. For best practice in assessing ED/EBD, information should be obtained from three major sources, as outlined in Table 1: parent reports, teacher reports, and direct assessment of the child.

Standardized parent, teacher, and self-report rating scales provide quantitative scores for measuring different patterns of problems and competencies. Interviews can corroborate rating scale results, as well as provide new information and opportunity to evaluate interaction patterns. Direct observations can further corroborate information obtained from other sources, as well as add information about the child's functioning in a particular setting. Observations are essential for functional analysis of problems, as discussed by Hintze (this volume) and Knoster and McCurdy (this volume). The next sections describe instruments and procedures for each data source listed in Table 1.

Standardized Rating Scales

Standardized rating scales provide efficient methods for obtaining parent and teacher reports of children's problems and competencies. Numerous rating scales have been developed for this purpose. Some instruments are "omnibus" measures that assess a wide range of potential problems. Examples are the CBCL, TRF, BASC, RBPC, and WPBIC. Other instruments are narrower in focus, such as the Conners (1997) scales for assessing attention deficits and hyperactivity. Narrow measures can be used in conjunction with omnibus measures to assess particular problems. It is also important to assess children's competencies or strengths. The *Behavioral and Emotional Rating Scale* (BERS) (Epstein & Sharma, 1998) is one

Table 1. Components of multidimensional assessment of ED/EBD

Parent Reports	*Teacher Reports*	*Direct Assessment of the Child*
Standardized Rating Scales	Standardized Rating Scales	Standardized Self-Reports
Parent interview	Teacher interview	Child clinical interview
a. Details of presenting problems b. History related to problems c. Other possible problem areas d. Feasibility of interventions e. Family factors and stressors	a. Details of presenting problems b. History related to problems c. Feasibility of interventions d. Initial goals and intervention plans	a. Activities, school b. Friends c. Family relations d. Fantasies e. Self-perception, feelings f. Child's view of problems g. For adolescents: somatic complaints, alcohol, drugs, trouble with the law
Questionnaires/Forms	Questionnaires/Forms	Direct Observations
	School Records	Personality Assessment

omnibus measure for assessing emotional and behavioral strengths. The BERS is scored on five empirically based scales: Interpersonal Strength, Family Involvement, Intrapersonal Strength, School Functioning, and Affective Strength. Other omnibus measures, such as the CBCL and TRF, also measure competencies, such as the child's involvement in activities and social organizations, school performance, and school adaptive functioning.

Standardized self-report rating scales have also been developed to obtain children's own views of their problems and competencies. Respondents are usually asked to rate lists of feelings or behaviors on dichotomous (e.g., true/false) or multi-point scales. The YSR is an example of an omnibus self-report scale for youth aged 11–18. The YSR has 102 problem items similar to those on the CBCL and TRF, except that items are worded in the first person. The YSR also has 16 socially desirable items and items for assessing the youth's involvement in activities and social organizations. The YSR is scored on the same eight empirically based syndromes as the CBCL and TRF, plus Internalizing, Externalizing, and Total Problems. The BASC system also has a self-report rating scale for ages 11–18. Other standardized self-report scales focus on particular types of problems, such as depression or anxiety. Examples are the *Child Depression Inventory* (CDI) (Kovacs, 1992), the *Reynolds Adolescent Depression Scale* (RADS) (Reynolds, 1987), and the *Revised Children's Manifest Anxiety Scale* (Reynolds & Richmond, 1985).

In multidimensional assessment, evaluators should compare scores on self-report rating scales to similar scores obtained from parent and teacher rating scales. The ASEBA Windows® computer scoring program was designed to facilitate such comparisons for the CBCL, TRF, and YSR. The program provides printouts of cross-informant comparisons for 89 common problem items as well as syndrome and broad scale scores. The program also provides *Q* correlations for judging the level of agreement between pairs of informants, such as two parents, a parent and a teacher, or the youth and a teacher/parent. When interpreting results from self-report rating scales, evaluators should consider how responses might be affected by a child's reading ability, insight, motivation, and willingness to disclose sensitive personal information. It is also important to consider the age and cognitive ability of the child. In general, older children are better able to reflect on their own emotions and behavior than are younger children. However, even some adolescents have difficulty adopting a personal perspective on their functioning.

Research has revealed low agreement between children's self-ratings and ratings from other informants, such as parents and teachers (Achenbach et al., 1987; Achenbach, 1991a). Again, this does not imply that only one perspective is the right one. For example, low problem scores from self-ratings, in contrast to high problem scores from parent and/or teacher ratings, may indicate a child's lack of awareness of problems or an unwillingness to disclose problems. High problem scores on self-ratings, in contrast to low problem scores from parents and/or teachers, may indicate the child's heightened sensitivity to problems that are not apparent to adult informants. Evaluators need to consider all of these possibilities when interpreting results from children's self-reports in comparison to reports from other informants.

ADVANTAGES OF STANDARDIZED RATING SCALES

For best practice, school psychologists are encouraged to select standardized rating scales with empirically based syndromes and large normative samples covering a wide age range for both genders. Standardized rating scales meeting these criteria have the following advantages:

1. Information is quantifiable and thus amenable to psychometric tests of reliability and validity.

2. Multiple items on omnibus measures provide data on a broad range of potential problems, rather than limiting the focus only to referral concerns or behaviors in one area.

3. Information is organized in a systematic way by aggregating problems into groupings of different syndromes and broad scales.

4. Empirically based syndromes cluster problems that co-occur in large samples of referred children, rather than being based on assumed diagnostic categories.

5. Normative data provide a standard for judging the severity of problems by comparing an individual to large samples of non-referred children.

6. Rating scales are economical and efficient, since most can be completed by the relevant informant in 10–15 minutes and can be scored quickly by hand or computer.

7. Sets of related rating scales can be used to compare similar data from multiple informants, such as parents, teachers, children themselves, and observers.

When choosing a standardized rating scale, it is important that it meet acceptable psychometric standards of reliability and validity. It is equally important that the scale provide useful information for assessing ED/EBD and planning appropriate interventions. To accomplish these goals, the following criteria should be considered:

1. Do the items on the rating scale pertain directly to the child's observable behavior (e.g., gets into fights) rather than consequences of behavior (e.g., often in trouble), inferences about behavior (e.g., lacks social skills), or family situations (e.g., on welfare)?

2. How are the items scaled? Simple yes/no scaling is less effective than multi-point scales, since most behaviors vary in degree. In general, 3- or 4-point scales have shown better discriminatory power than dichotomous scales (e.g., yes/no or true/false), or scales where zero equals "never."

3. Are the items on the scale appropriate for the particular situation? For example, some behavior is more likely to be observed by teachers (e.g., cannot follow directions), while other behavior is better observed by parents (e.g., has nightmares).

4. Do the forms and scoring procedures allow comparisons among multiple raters who observe the child under different conditions in and outside of school?

Limitations of Standardized Rating Scales

While standardized rating scales provide quantitative data on children's problems and competencies, they also have limitations. These include:

1. Rating scales do not identify the etiology or causes of children's problems. Most rating scales assess current functioning over a limited time frame, such as 2 or 6 months. To identify factors that may precipitate and sustain identified problems, evaluators must obtain additional information on such factors as biological conditions, earlier development, social interactions, and environmental circumstances.

2. Rating scales do not dictate choices for interventions. While results are useful for identifying specific areas of concern, additional data are necessary to determine appropriate and feasible interventions.

3. Rating scales are not "objective" measures of children's problems. Like most other assessment procedures, rating scales involve people's perceptions of problems. Perceptions can vary from one rater to the next and can be influenced by the rater's memory, values, attitudes, and motivations, as well as situational factors.

As best practice for school-based assessment of ED/EBD, an omnibus standardized rating scale should be obtained from at least one parent and one teacher who know the child well. If a child has multiple teachers, then it is useful to obtain ratings from several teachers to compare problems across different school environments. A standardized self-report rating scale can also be obtained from older children. Rating scale results must then be integrated with data from other procedures, including interviews and direct observations.

Interviews

In both clinical and school settings, interviews have long been a standard method for assessing children's emotional and behavioral problems (Busse & Beaver, 2000; McConaughy, 2000a, 2000b). For assessment of ED/EBD, interviews should be conducted with parents (or parent surrogates), teachers, and the child, whenever possible. Interview formats can vary from highly structured to semistructured and unstructured approaches.

Parent and Teacher Interviews

Several structured diagnostic interviews have been developed for interviewing parents about their children's problems. Most structured diagnostic interviews have parallel forms for parents and children, and some have been adapted for teacher interviews. Structured diagnostic interviews require strict adherence to standard procedures for asking questions, rating responses, and ordering items. An example is the NIMH *Diagnostic Interview Schedule for Children-Fourth Edition* (NIMH DISC-IV) (Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000). Other structured diagnostic interviews also utilize standard question formats, but allow the interviewer to adjust the length and order of items to create a more conversational approach. Examples are the *Child Assessment Schedule* (CAS) (Hodges, Gordon, & Lennon, 1990) and the *Schedule for Affective Disorders and Schizophrenia for School-Age Children* (K-SADS) (Ambrosini, 2000) (for a review, see McConaughy, 2000b).

A disadvantage of structured diagnostic interviews is their exclusive focus on psychiatric diagnoses, which may not be necessary to address the child's problems in the school setting. However, a structured diagnostic interview with a parent can be useful when a diagnosis is needed to facilitate referrals for mental health services or to make referrals for programs targeted at specific types of disorders, such as ADHD, CD, or anxiety disorders. However, because they contain questions covering many different disorders, structured diagnostic interviews can be very time consuming. Their rigid pattern of questioning can also seem unnatural and tedious for the interviewer and interviewee.

In contrast, unstructured interviews do not follow a standard format. They have the advantage of flexibility, since they can be tailored to specific problems and concerns raised by the interviewee. However, unstructured interviews may fail to address other important issues, such as other possible problem areas, family factors and stressors, what interventions have already been tried, and what interventions are feasible in a given setting. Unstructured interview formats also make it difficult to compare information across parents, teachers, and children.

For school-based assessments, semistructured behavioral interviews are especially appropriate for parents and teachers (e.g., see Busse & Beaver, 2000; Kratochwill, this volume). If standardized rating scales are obtained from the same informants, then parent and teacher interviews can focus on information not readily assessed by rating scales.

The first and second columns of Table 1 list general areas to be covered in parent and teacher behavioral interviews. Each interview begins with questions regarding details of a child's presenting problems. Once specific problem behaviors have been identified, the interviewer then asks about antecedent, sequential, and consequent conditions that precipitate and sustain the behaviors. The interviewer should also inquire about parents' and teachers' feelings regarding targeted problems, their usual responses to the problems, and their expectations and preferences regarding the child's behaviors. While the focus of parent and teacher interviews is primarily on a child's current behavior, historical information about identified problems should be obtained as well. It is also important to explore other possible problem areas. This can be accomplished by discussing scores and profile patterns obtained from standardized rating scales, assuming these instruments were completed before the interviews. To assess the feasibility of different interventions, it is useful to ask parents and teachers about their typical strategies for coping with identified problems, such as rewards, punishments, and other procedures.

Parents should also be asked about family factors and stressors that may be related to their children's problems. Examples are:

1. Changes in family structure or relationships, such as divorce or a death in the family
2. Upsetting events or changes at home or school for the child
3. Changes in residence or economic status of the family
4. Psychological or psychiatric problems of family members and mental health services for such problems
5. Significant losses experienced by the child, such as death or loss of a loved one, loss of a pet, or breakup of peer or romantic relationships
6. Medical traumas, hospitalizations, or serious illnesses of the child or family members
7. Alcohol or drug use/abuse by the child or family members

8. Traumatic episodes experienced by the child or family members, such as a suicide attempt, sexual or physical abuse, violence, or serious accident

9. Trouble with the law or involvement with the justice system or social service agencies by the child or family members

CHILD CLINICAL INTERVIEWS

Semistructured formats are usually most appropriate for child clinical interviews. Unstructured interviews are the least useful, because it is difficult to quantify their results and clinicians vary widely in their interpretations of children's responses. Unstructured interviews are also less amenable to psychometric tests of reliability and validity than are semistructured interviews. Structured diagnostic interviews are also not recommended as best practice for interviewing children in the school setting, because they are often too long and tedious and the information they provide can usually be obtained more reliably from parents (see McConaughy, 2000b).

Semistructured child clinical interviews offer unique opportunities for evaluating children's patterns of problems, their coping strategies, and their perceptions of significant persons and events related to their problems (Hughes & Baker, 1990; McConaughy, 2000a). They also provide opportunities for directly observing children's behavior and interaction styles, especially behavior that may impinge on different treatment options. Hughes and Baker (1990) cited several important behaviors to note during child clinical interviews, such as response to limit setting, impulsivity, distractibility, reaction to frustration or praise, language skills, responsiveness to the interviewer, emotional reactions, nervous mannerisms, and range of affect. Observations of the child's behavior and responses during the interview can then be compared to reports from other informants, such as parents and teachers. A well-conducted child clinical interview can also serve as the initial step for establishing rapport necessary for treatment. In this respect, the child clinical interview can serve as a bridge between assessment and intervention.

The *Semistructured Clinical Interview for Children and Adolescents* (SCICA) (McConaughy & Achenbach, 1994) is an example of a standardized interview for children ages 6–18. The SCICA utilizes a semistructured protocol covering the different content areas listed in the third column of Table 1. Similar areas are often covered in other semistructured child interviews. A unique feature of the SCICA is the use of structured rating scales for scoring the interviewer's observations of the child's behavior and problems reported by the child during the interview. The SCICA rating scales contain 120 observation items and 114 self-report items to be scored on a 4-point scale for ages 6–18. Eleven additional self-report items are scored for adolescents, covering somatic complaints, alcohol, drugs, and trouble with the law. The 1994 SCICA scoring profile contains eight empirically based syndrome scales for ages 6–12, plus broad scales for Internalizing, Externalizing, Total Observations, and Total Self-Reports. The SCICA profile offers the advantage of separate syndromes for scoring observations (Anxious, Withdrawn, Attention Problems, Strange, Resistant) and the child's self-reports (Anxious/Depressed, Family Problems, Aggressive Behavior). A revised SCICA profile to be released in 2001 will contain scales for ages 6–11 and 12–18. As part of the ASEBA system, quantitative scores from the SCICA profile can easily be compared to similar scores on the CBCL, TRF, and YSR profiles.

Besides providing additional information on problem patterns, the child clinical interview can be a key source for assessing feasibility of different interventions and deciding whether to refer the child for mental health or social services outside of school. Along with questions related to the topics listed in Table 1, other questions can also be added to address specific referral issues, such as suicidal risk, danger to others, or possible physical or sexual abuse.

Direct Observations

Direct observations are another important data source for assessing ED/EBD. Direct observations are also an essential data source for functional behavioral assessment (see Knoster & McCurdy, this volume). For some children with emotional or behavior problems, direct observations may have already been conducted by the school psychologist as part of behavioral consultation with teachers. After a child has been referred for evaluation, additional direct observations should be conducted. These can once again be done by the school psychologist, or by other members of the school staff who have been trained in observational techniques. Observations should occur in relevant settings where problems are occurring. It may also be useful to observe the child in other less problematic situations for comparison.

Because children's behavior is apt to vary from day to day, it is important to obtain more than one observation over different days. It usually is better to conduct observations of relatively short duration (e.g., 10–20 minutes) on different days than to rely on one single lengthy observation. Observing one or two randomly selected "control" children in the same setting provides a comparison with peers in the same environment. Finally, the validity of direct observations may become suspect if the target child is aware of being observed. This problem can be reduced by using an observer who is not known by the child or who is a regular visitor to the classroom. If the observer is also one of the evaluators, then it is advisable to observe the child before interviewing or testing.

Direct observations require an independent observer who can record overt behaviors and environmental conditions surrounding the behaviors (see Hintze, this volume; Skinner, Rhymer, & McDaniel, 2000). For optimal effectiveness, direct observations should focus on target behaviors amenable to change. Antecedent and consequent events should also be noted. Observations may utilize narrative recording or empirical methods.

To obtain narrative recordings, an observer writes a description of events that occurred within a given time frame. Methods for narrative recording include descriptive time sampling, antecedent-behavior-consequent (A-B-C) analysis, or daily logs. Narrative recordings are then used to operationally define behaviors that can be targeted for intervention.

Empirical methods require operationally defined behaviors that can be recorded or rated by an observer. Once operational definitions have been established, several different techniques can be employed. Continuous recording methods count the number of times a behavior (or event) occurs within a given period or record the duration of time in which the behavior (or event) was observed. Continuous recording is most effective when behaviors have discreet beginnings and ends, low to moderate rates of occurrence, and are present only briefly. Time sampling records the presence or absence of operationally defined behavior within short specified time intervals. Time sampling is useful when multiple simultaneous target behaviors hinder continuous recording, or when samples of behavior are observed across several different settings.

The *Direct Observation Form* (DOF) (Achenbach, 1986) is an example of a standardized rating scale for obtaining time samples. The DOF contains 96 items scored over a 10-minute interval. The DOF scoring profile contains six empirically based syndromes, plus Internalizing, Externalizing, and Total Problem scales. Children's on-task behavior is also rated at 1-minute intervals over each 10-minute sample. As part of the ASEBA system, the DOF has a scoring profile similar to profiles for the CBCL, TRF, and YSR, which facilitates comparisons of observations with reports from other informants. Hintze (this volume) and Skinner et al. (2000) discuss examples of other procedures and formats for obtaining direct observations.

Personality Assessment

Personality assessment can provide additional information on aspects of social-emotional functioning. Personality assessment, in its broadest context, can include some of the procedures already discussed in this chapter, such as self-report rating scales and child clinical interviews. Other commonly used instruments are the *Minnesota Multiphasic Personality Inventory for Children-Adolescents* (MMPI-A) (Butcher et al., 1992) and *Personality Inventory for Children* (PIC) (Wirt, Lachar, Klinedinst, Seat, & Broen, 1990) described in detail by Knoff (this volume). It should be noted, however, that while standard scoring procedures exist for many personality measures, the interpretation of results still relies heavily on clinical judgment. Moreover, normative data, reliability, and validity are limited for certain types of procedures, such as projective techniques. Personality assessment, therefore, should be conducted only by school psychologists or clinical psychologists specifically trained in this methodology. Even then, results should be interpreted with caution. Since different examiners often disagree in their interpretations of personality measures, such procedures should *not* be used as the primary or sole data sources for assessment of ED/EBD.

Social Skills and Social Reasoning

Many children with emotional or behavioral problems have difficulties in social interactions. Therefore, assessing social skills and social reasoning is important for evaluating ED/EBD and designing interventions. Methods most frequently used include behavior observations, rating scales, children's self-reports, and sociometric techniques (see Gresham, this volume). Several standardized rating scales have been specifically developed to measure social skills. Examples are the *School Social Behavior Scales* (Merrell, 1993), *Social Skills Rating System* (Gresham & Elliott, 1990), and the *Walker-McConnell Scale of Social Competence and School Adjustment* (Walker & McConnell, 1988).

Observations of children's behavior with peers and adults in natural settings, such as the regular education classroom or at recess, can also provide information about social skills and relationships. Observing children's behavior during social skills instruction or role-playing situations provides a more direct method for assessing specific areas of social reasoning, such as empathy or problem solving, and specific social behaviors, such as giving and receiving praise or criticism.

Co-Occurring Conditions

Emotional or behavioral problems can overlap or cooccur with other types of problems. Children with ADHD or learning disabilities, for example, frequently display emotional or behavioral problems (Barkley, 1990; McConaughy, Mattison, & Peterson, 1994). Children with chronic or acute medical conditions, such as allergies, seizure disorders, traumatic brain injury, and Tourette's syndrome, may exhibit co-occurring emotional or behavioral problems, as can children with intellectual or communication impairments. In certain cases, children with other identified disabilities may also be determined to have ED/EBD, according to IDEA criteria. However, emotional or behavioral problems that are clearly a function of another medical, learning, cognitive, or communication disorder should not automatically be classified as ED/EBD. Knowledge of the child's educational and medical history, coupled with direct observations, should help evaluators judge the presence or absence of co-occurring conditions.

Etiology or Causes of Problems

Multidimensional assessment does not require uncovering the etiology or underlying causes of emotional or behavioral problems. Instead, it is more a process of identifying barriers (emotions and behaviors) that impede children's optimal functioning. One may hypothesize about why a child behaves in a certain way, or the way in which a pattern of behavior is understandable from an etiological perspective. Such hypotheses can contribute to a greater understanding of the child and can be helpful in designing interventions. An example would be distinguishing between an acquisition deficit (the absence of a skill) versus a performance deficit (where the skill is clearly evident but the child fails to use the skill) (see Gresham, this volume). Distinguishing between acquisition versus performance deficits is important because it implies different ways of intervening: teaching the skill itself in the former instance versus teaching a replacement behavior or encouraging generalization in the latter instance. Forming hypotheses about the impact of antecedent and consequent events on behavior can be equally useful for functional assessment and intervention planning. At the same time, the origins of emotional and behavioral problems are usually complex, making it difficult to identify clear links between specific causes and effects. For this reason, searching for specific etiologies, except perhaps clear medical problems, is likely to be an unproductive undertaking for most ED/EBD assessments.

Achievement and Educational Performance

All special education evaluations require assessment of a child's current academic achievement and educational performance. For ED/EBD classifications, evaluators must determine whether the identified emotional or behavioral problems adversely affect educational performance as one of the qualifying conditions for special education eligibility. Standardized tests, curriculum-based assessment, grade reports, and work samples can all provide evidence regarding academic achievement. Evaluation of broader educational performance can focus on school adaptive functioning and academic behaviors, such as productivity and success. The *Academic Performance Rating Scale* (APRS) (DuPaul, Rapport, & Perriello, 1991) is a standardized instrument designed for this purpose. Standardized teacher rating scales, such as the BASC, SSRS, and TRF, also provide scores for academic performance and school adaptive functioning, as well as scores for problems. Evaluators can use these measures along with other achievement data to judge adverse effects on educational performance.

Social Maladjustment

Paragraph (ii) of the IDEA definition of ED/EBD specifically excludes "children who are socially maladjusted unless it is determined that they are seriously emotionally disturbed." The social maladjustment clause was added to the original definition of ED/EBD to exclude adjudicated delinquents from special education (Skiba & Grizzle, 1991). However, certain authors (e.g., Slenkovich,1992a, 1992b) have argued that children with externalizing disorders, such as DSM diagnoses of ODD and CD, are socially maladjusted, and therefore should be excluded from special education. Others disagree, arguing there is no theoretical or empirical basis to exclude youth with externalizing disorders from special education (Forness, 1992; Skiba & Grizzle, 1991, 1992). Furthermore, research studies have shown high co-occurrence or "co-morbidity" between externalizing and internalizing problems (McConaughy & Skiba, 1993).

All of the above issues muddy interpretations of the social maladjustment clause. To guide best practice, school psychologists and other evaluators are encouraged to focus first on assessing the IDEA (or state) defined characteristics for ED/EBD. If a child exhibits one or more of the defined characteristics, and all three qualifying conditions, then that child can be considered to have ED/EBD (assuming other possible explanations for the problems have been ruled out). Once ED/EBD criteria are met, further evidence of social maladjustment is irrelevant for purposes of determining eligibility for special education or Section 504 accommodations. The presence of social maladjustment along with ED/EBD, however, is an important factor to consider in planning interventions, since children with such problems often require mental health and/or social services in addition to educational services to meet their needs.

Need for Special Education Services

To qualify for special education services, it is not sufficient that a child exhibit a specific disability, such as ED/EBD. *Need* for special education must also be documented. That is, the multidisciplinary team must demonstrate that the child *needs* specially designed instruction or other interventions that cannot be accomplished through remedial education or related services. For many children with emotional or behavioral problems, interventions may have been already been undertaken prior to referral for evaluation. If pre-referral interventions have done little to reduce the child's problems or to improve school performance, then such resistance to change could be evidence of the need for special education services. School psychologists who have been involved in prereferral and regular education interventions can play a key role in multidisciplinary team decisions regarding need for special education and other more intensive interventions.

Written Reports

After data gathering has been completed, evaluators must integrate relevant findings into a written report. The report should provide specific information that addresses the characteristics and qualifying conditions of the ED/EBD definition. It is not sufficient to merely state that a child has an "ED/EBD." The report should provide clear and specific descriptions of the child's emotional or behavioral problems, as reported by parents and teachers and directly assessed through child clinical interviews, observations, self-reports, and other measures. Scores on standardized rating scales and self-reports, in particular, can provide quantitative evidence of the extent to which a child exhibits characteristics of ED/EBD. Accordingly, Table 2 outlines relations between the IDEA criteria for ED/EBD and empirically based syndromes scored from the CBCL, TRF, & YSR, BASC, RBPC, and WPBIC. For each instrument, Table 2 lists the syndromes containing problem items that are most closely related to each ED/EBD characteristic (see McConaughy (1993b) and Achenbach & McConaughy (1997) for applications of CBCL, TRF, and YSR scores to the IDEA criteria for ED/EBD).

The written report should provide information on the duration and severity of identified problems. Standard scores and clinical cut points derived from normative samples can be examined to determine the degree to which a child's identified problems deviate from those typically reported for children of the same age and gender. It is also important to discuss how the identified problems may adversely affect academic

Table 2. Relations between IDEA Criteria for ED/EBD and Empirically Based Syndromes

IDEA Criteria for ED	*CBCL, TRF, and YSR*	*BASC*	*RBPC*	*WPBIC*
Inability to learn	• Attention Problems	• Attention Problems	• Attention Problems-Immaturity	• Distractibility
Inability to build or maintain relationships	• Social Problems • Withdrawn	• Withdrawal	• Anxiety-Withdrawal	• Withdrawal • Disturbed Peer relations
Inappropriate types of behavior or feelings	• Aggressive Behavior • Thought Problems	• Aggression • Atypicality	• Conduct Disorder • Psychotic Behavior	• Acting Out • Immaturity
General pervasive mood of unhappiness	• Anxious/Depressed	• Depression	—	—
Tendency to develop physical symptoms or fears	• Anxious/Depressed • Somatic Complaints	• Anxiety • Somatization	• Anxiety-Withdrawal	• Immaturity

Note: CBCL, Child Behavior Checklist; TRF, Teacher's Report Form; BASC, Behavior Assessment System for Children; RBPC, Revised Behavior Problem Checklist; WPBIC, Walker Problem Behavior Identification Checklist; YSR, Youth Self-Report.

achievement and other aspects of educational performance. In most cases, additional evidence regarding educational performance will be provided by other evaluators.

Finally, as best practice, the written report should contain specific recommendations that link assessment results to interventions. Examples include recommendations for consultation with teachers, home-school collaboration, behavioral interventions with students, classroom accommodations, schedule alterations, adaptations in teaching strategies, social skills instruction, and individual, group, or family counseling. The report may also contain recommendations for monitoring the student's behavioral and academic progress, evaluating outcomes of chosen interventions, and making adjustments in interventions to ensure efficacy. The school psychologist may be directly or indirectly involved in several of the recommended activities.

SUMMARY

Best practice procedures were presented for assessing children's emotional or behavioral disorders. A multidimensional approach was recommended that requires gathering and integrating information from multiple data sources. Multidimensional assessment assumes that no single method or informant can capture all relevant aspects of a child's emotional or behavioral functioning. While school-based assessments can serve several purposes, a major emphasis in this chapter was assessing ED/EBD as a disability classification for special education or Section 504 accommodations.

Procedures were described for obtaining parent reports, teacher reports, and direct assessment of the child. As best practice, some combination of the following procedures was recommended: standardized rating scales, standardized self-reports, parent and teacher interviews, child clinical interviews, direct observations of the child, and reviews of relevant background information. Some cases may require additional assessment of intellectual ability and communication skills, social skills, or broader aspects of personality. All special education evaluations require assessing the impact of an identified disability on academic achievement and educational performance.

After all necessary data have been gathered, the evaluator must integrate information in a written report. For special education evaluations, the report should present specific findings that address the criteria for ED/EBD, as defined in the IDEA or specific state regulations. Empirically based syndromes scored from standardized rating scales and self-reports can provide quantitative evidence of the characteristics of ED/EBD. Parent and teacher interviews, child clinical interviews, and direct observations can contribute additional evidence of ED/EBD. Normative comparisons on standardized rating scales and self-reports can determine whether identified problems deviate from expected behavior "to a marked degree." Duration of problems and their adverse effect on educational performance must also be documented. Recommendations in written reports should link assessment results to interventions as much as possible.

Although major emphasis was placed on assessment of child psychopathology, or ED/EBD, many of the best practice procedures described in this chapter can be used for other purposes, such as school-based behavioral consultation and functional behavioral assessment. Once interventions have been implemented, similar assessment procedures can be used to monitor children's progress and to evaluate outcomes. For example, standardized rating scales, interviews, and direct observations can provide baseline and follow-up data for children with ED/EBD. Comparing Time 1 and Time 2 data on the same measures can determine whether there has been any change in identified problems. It is also necessary to obtain similar data for comparable individuals or groups who have not received the interventions to determine whether changes are associated with specific interventions. Single subject designs can also be used to evaluate the effectiveness of interventions with specific individuals. Monitoring progress and evaluating outcomes are essential steps for ascertaining which interventions are most effective for which types of problems.

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Breen, M., & Fiedler, C. (Eds.) (1996). *Behavioral approach to the assessment of youth with emotional/behavioral disorders: A handbook for school-based practitioners*. Austin, TX: PRO-ED.
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Describes various procedures for interviewing children and adolescents for clinical and school-based assessments. Early chapters cover developmentally sensitive interviewing techniques for children of varying ages. Later chapters describe different interviewing procedures, including structured diagnostic interviews, psychodynamic approaches, behavioral interviewing, and

problem-specific interviews. An excellent resource for school-based practitioners and clinicians involved in child assessment and therapy.

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Shapiro, E. T., & Kratochwill, T. R. (Eds.) (2000b). *Conducting school-based assessments of child and adolescent behavior*. New York: Guilford.

A hands-on companion volume to Shapiro & Kratochwill (2000a). The initial chapter reviews goals and methods of multidimensional assessment of emotional and behavioral problems. Subsequent chapters guide readers through direct and indirect methods of assessment, including direct observation, analogue assessment, functional analysis, child self-reports, teacher and parent interviews, standardized rating scales, and self-monitoring procedures. Many chapters include practical recommendations and case illustrations. The concluding chapter provides recommendations for effective work with culturally and linguistically diverse students. An excellent how to guide for K–12 practitioners in regular and special education settings.

82 Best Practices in Nondiscriminatory Assessment

Samuel O. Ortiz
St. John's University

OVERVIEW

The concern with fair and equitable psychological assessment is a mirror of the values in our culture. As the nature of those values has changed, so have our concerns (Oakland & Laosa, 1976; Sandoval, 1998). The late 1950s and 1960s saw the rise of the civil rights movement, which brought to the forefront issues of discrimination that had remained entrenched but largely unspoken and unacknowledged in our nation's people and its systems. The rights of many diverse groups of people were upheld time and again by the U.S. Supreme Court, which affirmed equal protection under the law and the unconstitutionality of systematic and deliberate discrimination on the basis of race, creed, color, gender, or national origin (Irons & Guitton, 1993). During this dramatic shift in our country's cultural values, individuals with disabilities, including the parents of children with disabilities, were no less reticent to assert their rights (Jones, 1988; Laosa, 1976; Oakland & Laosa, 1976; Valdés & Figueroa, 1994). The passage of the landmark P.L. 94-142, the Education of Handicapped Children Act (later re-authorized and renamed the Individuals with Disabilities Education Act; IDEA) stands as testimony toward eliminating longstanding bias and discriminatory practices in education. IDEA contains a clear directive regarding the potentially discriminatory aspects of assessment, in that "tests and other evaluation materials used to assess a child...are selected and administered so as not to be discriminatory on a racial or cultural basis; and are provided and administered in the child's native language or other mode of communication" (§300.532, Evaluation Procedures).

Attention to the attenuating effects of racial, cultural, and linguistic differences on test performance is evident in the wording. Moreover, this same section of IDEA requires the use of a "variety" of tools and strategies, emphasizing the fact that tests alone are unlikely to provide an accurate picture of functioning. Thus, nondiscriminatory assessment is not defined as a single procedure or test, but as a wide range of approaches that collectively seek to uncover as fairly as possible relevant information and data upon which decisions regarding functioning and performance can be equitably based. In other words, nondiscriminatory assessment is not a search for an unbiased test but rather a process that ensures every individual, not just those who are different in some way, is evaluated in the least discriminatory manner possible. To live up to its very name, nondiscriminatory assessment should be applicable to everyone, not just those from a particular group. In the most basic sense, "it is recognized that nondiscriminatory assessment may be considered one dimension of the more general problem of valid assessment of any child" (Oakland,.1976, p. 1).

Completely unbiased assessment, however, is an illusion. It is impossible to eliminate every single instance of bias or every potentially discriminatory aspect of assessment. Even with the most objective means and methods, bias exists in some form or another. Because elimination is unrealistic, the goal of nondiscriminatory assessment should be viewed as an effort to reduce it to the maximum extent possible.

Nondiscriminatory assessment is, however, much more than the sum of its parts. Although many discrete methods for reducing bias in assessment have been presented (Gonzalez, Brusca-Vega, & Yawkey, 1997; Gopaul-McNicol & Thomas-Presswood, 1998; Hamayan and Damico, 1991; Sandoval, Frisby, Geisinger, Scheuneman, & Grenier, 1998; Valdés & Figueroa, 1994) much less attention has been paid to the development of a broad, comprehensive framework for nondiscriminatory assessment. Application of a comprehensive framework designed to guide the general collection and interpretation of data in a systematic manner seems key to the process of equitable assessment. Engaging in assessment without the benefit of a guiding approach produces unrelated and disconnected activities and procedures that will likely fail to address important areas of bias and will produce data that are ambiguous and difficult to interpret. Nondiscriminatory assessment is much more than considering which standardized tools should be used and which should not. There is no simple answer or prescription, and standardized tests represent only one element of concern with bias. The use of one method or one procedure that may reduce bias is hardly enough to constitute unbiased assessment (Jones, 1988; Sandoval et al., 1998; Valdés & Figueroa, 1994). The use and application of a comprehensive, systematic framework comprising a broad range of methods and procedures is critical to engaging in best practices in nondiscriminatory assessment.

BASIC CONSIDERATIONS

The increasing diversity of the U.S. population, especially in the public schools, has caused service and professional organizations to recognize the implications for change in both practice and training of its members. For example, in 1990, the American Psychological Association (APA) published *Guidelines for Providers of Psychological Services to Ethnic, Linguistic, and Culturally Diverse Populations* (American Psychological Association, 1990) in an effort to encourage psychologists to (a) consider the influence of language and culture on behavior when working with diverse groups, (b) consider the validity of the methods and procedures used to assess minority groups, and (c) make interpretations of resultant psychological data within the context of an individual's linguistic and cultural characteristics (Lopez, 1997).

Many researchers have outlined certain procedures or methods related to compliance with these directives (e.g., Gonzalez et al., 1997; Gopaul-McNicol & Thomas-Presswood, 1998; Hamayan & Damico, 1991; Samuda, Kong, Cummins, Pascual-Leone, & Lewis, 1991; Sandoval et al., 1998; Valdés & Figueroa, 1994). Many of these methods revolve primarily around the modified use of or alternatives to standardized tests rather than specification of a comprehensive approach to nondiscriminatory assessment. The focus on reducing or avoiding bias related to the use of standardized, norm-referenced tests by these methods is not surprising given that tests are ubiquitous in psychoeducational assessment and often carry significant implications with respect to questions regarding diagnosis and intervention (e.g., special education eligibility). School psychologists are quite familiar and comfortable with this form of assessment, and it usually forms the bulk of their skills in assessment (Reschly & Grimes, 1995). However, the training of school psychologists often fails to provide sufficient competency regarding what might make their use biased or discriminatory and even less about how to use them in a less biased or discriminatory manner (Geisinger, 1998; see also Flanagan & Ortiz, in this volume).

Despite the need for information and guidance regarding the manner in which school psychologists may apply equitably or find alternatives to standardized tests, the varied and numerous recommendations offered in the literature for nondiscriminatory assessment have not gained wide acceptance in general school psychology practice. One possible reason is the lack of a comprehensive framework for nondiscriminatory assessment that guides the manner in which effective methods for reducing bias can be integrated into practice in a deliberate and systematic way. Indiscriminant and uninformed use of bias reduction techniques is a poor foundation upon which to claim fairness. Assessment activities that seek to reflect equity need to be undertaken within a broad framework built upon systematic and informed procedures that are brought together to form a valid context for interpretation. Apart from discussion of the main issues involved in nondiscriminatory assessment, the significance of the lack of a comprehensive and guiding model is underscored by the delineation of "best practices" in the latter portion of this chapter that is presented within the structure of just such a framework.

Hypothesis Testing

Nondiscriminatory assessment should incorporate the notion of hypothesis generation and testing. Although psychometric data are often viewed as objective, they have no inherent meaning and derive significance only from interpretation. Personal and professional bias often leads to idiosyncratic interpretations of the same data, in particular when assessment was begun with preconceived ideas. Consciously or unconsciously, bias on the part of the evaluator affects interpretive decisions and is known as confirmatory bias (Matsumoto, 1994; Sandoval, 1998). The chances of making incorrect inferences about data on the basis of preconceived ideas can be reduced through an approach that utilizes hypothesis generation and testing.

When a school psychologist or other evaluator conducts an assessment with pre-conceived notions regarding what the data will show (e.g., expected patterns of performance on a test), confirmatory bias can occur both in the type of data that are collected and the manner in which the data are interpreted (Matsumoto, 1994; Sandoval, 1998). For example, learning problems in the classroom may be erroneously ascribed to attention difficulties and thus subsequent data gathering efforts will tend to focus only on examining issues related to attention at the expense of other potential factors, such as limited English proficiency, that may be related to the learning problem. Conversely, attributions of behavior that are made on the basis of stereotyped or pre-conceived notions can often steer assessment away from the real cause of many school-related problems. Indeed, if there exists a belief that a student's learning problems or behavior are attributable to personality, environmental, cultural, or linguistic differences, then no assessment may even be undertaken in cases where the learning difficulties may in fact be related to factors that can be readily ameliorated (e.g., instructional mismatch, health problems, sensory dysfunction, and so forth). These preconceptions can be particularly discriminatory whenever standardized tests are used. Believing that an individual is disabled can directly affect the manner in which the test is administered and scored (benefit of the doubt will tend toward expectancies of dysfunction and disability) and the manner in which data are interpreted. The evaluator will tend to look for patterns and results in the data which support the pre-conception and is predisposed to perceiving only those patterns consistent with the a priori beliefs. Moreover, there is a tendency to ignore, minimize, or reject data counter to the assumption (Matsumoto, 1994; Sandoval, 1998).

Bias related to preconceived notions of dysfunction or discriminatory misattributions of performance or behavior tend to influence the very nature and range of data that will be collected. The questions asked during interviews, the behaviors observed in the classroom, and the work samples chosen for analysis will all be influenced by such preconceptions. Asking a parent when their child first learned to walk is different than asking if their child was in fact a late walker. School psychologists may reduce this form of bias by avoiding attempts to confirm presumptions of pre-existing deficits and testing hypotheses instead. The process of assessment should begin with the hypothesis that the examinee's difficulties are not intrinsic in nature, but rather that they are more likely attributable to external or environmental problems. When standardized tests are used, the same assumption of normality should be used. In other words, the individual being tested is not impaired and general ability, performance, or functioning in any specific area is within normal limits. This assumption forms, in essence, a null hypothesis that can be evaluated with both quantitative and qualitative data to determine if it should be retained or rejected in favor of an alternative hypothesis (i.e., that performance is not average or within normal limits). When the process of evaluation is initiated with a presumption of normality, it reduces the tendency to search for data or "see" patterns of dysfunction where none may exist.

Another nondiscriminatory benefit of testing hypotheses that are not based on preconceptions is achieved by using the process for intervention in a proactive rather than reactive manner. For example, evaluation that seeks to determine the particular conditions under which a student's learning may be improved or accelerated leads to the collection of data that are directly tied to intervention. The very purpose of the evaluation in such cases is to enhance learning rather than simply diagnose the causes of poor performance. Even when there may be a diagnostic component to evaluation, assessment should always be linked to intervention and the potential discriminatory influence of confirmatory bias can be reduced significantly when the focus is on identifying ways to improve school performance and learning rather than attempting to simply pinpoint the underlying cause of observed problems.

In sum, although it may be difficult not to entertain preconceived notions regarding the reasons for learning difficulties, particularly if efforts at intervention and treatment have failed, evaluation of data must remain squarely focused on whether hypotheses, not opinions, attitudes, or beliefs are or are not supported. Unless and until the data suggest strongly to the contrary, the null hypothesis that an individual's school problems are related to situational, not intrinsic variables, or that behavior or performance are normal and intact, must not be rejected. In addition, the alternative hypothesis should not be considered as providing de facto support for any preconception. The reasons why an individual may be having true problems learning in the classroom or why performance on any given test might fall outside of the normal range are numerous. Nondiscriminatory assessment seeks to ensure that the vast array of potential causes for learning difficulties, behavior problems, or low performance (e.g., low motivation, physical illness, anxiety, cultural or linguistic difference) have been ruled out as primary causes for any observed learning problems or patterns of deficit in the collected data. The act of developing and using hypotheses that affirm normality to guide the collection and interpretation of data remains central to reducing confirmatory bias and establishing defensible practices in nondiscriminatory (i.e., less discriminatory) assessment.

Cultural and Linguistic Competency

Nondiscriminatory assessment represents a collection of approaches; each designed to systematically reduce bias within the broader framework. Cultural and linguistic competence is fundamental to that process. Cultural competence reflects a knowledge base of, or direct experience with, the values, attitudes, beliefs, and customs of a particular culture that can be used as both guide and context for collecting and evaluating any and all assessment data (Leigh, 1998). Psychologists need not be raised natively in a particular culture in order to derive such competence, but the necessary skills will not develop by reading a book or taking a trip (Frisby, 1998). Those not fortunate enough to receive direct experience and education toward development of cultural competence from their training programs will need to embark on a focused process that includes a variety of professional development activities (Geisinger & Carlson, 1998; Leigh, 1998). In some cases cultural advocates from the community can assist in providing consultation regarding the particular aspects of culture that may be relevant to the evaluation.

Linguistic competence is reflected in two distinct ways: the ability to communicate effectively in an individual's native language (eliminating the need for an interpreter) and possession of a knowledge base related to first and second language development and instructional methodology and pedagogy (Sandoval & Durán, 1998). Possession of the ability to communicate effectively in an individual's native language does not automatically imply competency in first and second language development, instructional methodology, and pedagogy. Research has demonstrated that both cultural (not race, but acculturation) and linguistic (proficiency) differences are significant factors that can influence an individual's performance on psychological, language, and achievement tests (Comas-Diáz & Grenier, 1998; Cummins, 1984; Frisby, 1998; Sandoval et al., 1998; Valdés & Figueroa, 1994). Ortiz and Flanagan (1998) note, "mere possession of the capacity to communicate in an individual's native language does not ensure appropriate, nondiscriminatory assessment of that individual. Traditional assessment practices and all their inherent biases can be quite easily replicated in any number of languages" (p. 426). The entire process of assessment is subject to bias whenever there is a failure to account for culturally based influences including conceptions of time, world views, patterns of acculturation, normative behaviors, beliefs, values, attitudes, and expectations (Frisby, 1998; Salvia & Ysseldyke, 1991).

In general, the combination of cultural and linguistic competence may be defined as possession of the following: (a) skill and competence in selecting and using culturally appropriate methods, procedures, and tools that are designed to reduce bias systematically in assessment; (b) knowledge of, and familiarity with, cultural factors relevant to the individual being assessed and the ability to evaluate data within the context of that culture; (c) knowledge of language development, second language acquisition, models of bilingual or English as a Second Language education and their relationship to achievement and school based learning; and (d) the ability to communicate effectively and competently in the native language of the individual being evaluated (Cummins, 1984; Hakuta, 1986; Krashen, 1985; Leigh, 1998). Within these general definitions, it is important to recognize that culture-specific knowledge and linguistic ability are secondary to the knowledge bases involving nondiscriminatory assessment practices and multi-language development and instruction. Linguistic or cultural similarity between examiner and examinee does not guarantee that the examiner possesses the requisite knowledge bases. A psychologist who has acquired the knowledge and skills described above is, with the assistance of an interpreter or a cultural advocate or both, much better equipped to conduct assessments that are far less discriminatory than an individual who possesses none of these skills but "matches" the child in terms of language or culture.

Using Standardized Tests

Because their training may not have provided direct education and supervision in nondiscriminatory assessment or cultural and linguistic competency, school psychologists may resort to utilizing procedures and tests that are not suitable or appropriate for measuring cognitive abilities or intellectual functioning in equitable ways (Flanagan & Halsell Miranda, 1995; Geisinger & Carlson, 1998; Lopez, 1997). Use of standardized tests within the context of nondiscriminatory assessment requires knowledge of (a) the adequacy of representation of each norm or comparison group, (b) the full range of abilities that are being measured and those that are not, and (c) the inherent linguistic demands and cultural loading of each test (Flanagan & Ortiz, 2001; McGrew, Flanagan & Ortiz, 2000; Ortiz, 2001; Valdés & Figueroa, 1994). Whenever tests are selected, administered, and interpreted in a manner that is not systematic or guided by research, decisions and conclusions based on resulting data may be invalid or largely indefensible (Sandoval, 1998). In general, use of well-constructed, technically sound, native language tests (for individuals who are evaluated in a language other than, or in addition to, English), where available, is preferable to tests with limited, poor, or unknown technical properties even if available in the native language (Geisinger, 1998). Oakland and Laosa (1976) reinforce this notion by stressing that "test misuse generally occurs when examiners do not apply good judgment or do not adhere to well-established professional procedures...governing the proper selection and administration of tests" (p. 17). In order to reduce bias that may arise from the use of standardized tests, knowledge regarding the ways in which such bias might operate and to what extent is required (Frisby, 1998; Valdés & Figueroa, 1994)

Bias in Testing

The issues surrounding the nature of bias in standardized (in particular intelligence) tests have been discussed at length in the literature (e.g., Figueroa, 1990; Kamphaus & Reynolds, 1987; Oakland, 1976; Sandoval et al., 1998; Sattler; 1992; Valdés & Figueroa, 1994). With respect to the nature of bias, as operationalized in these investigations, the results have been rather unanimous: the majority of major intelligence batteries are not psychometrically biased (Valdés & Figueroa, 1994). Tests have been examined for bias related to item content, factor structure, mean group IQ differences, and prediction, all with the same result—no bias found (Jensen, 1974, 1980; Sandoval, 1979; Sandoval, Zimmerman, & Woo-Sam, 1983; Valdés & Figueroa, 1994). This is not surprising, however, because decades of test development have succeeded in creating instruments that measure quite well what they purport to measure. In the case of native English-speaking individuals raised in mainstream U.S. culture, they measure intelligence, or different facets of cognitive ability, or they predict achievement as well if not better than anything else irrespective of race or ethnic origin (Niesser et al., 1996). However, in the case of individuals whose experiential backgrounds (not race, ethnicity, or even culture per se) differ from the mainstream, bias may well operate. Oakland and Matuszek (1976) provide an eloquent synopsis of such bias and their comments deserve to be quoted in full:

> The acculturation patterns governing the development of many children from racial-

> ethnic minority groups or from lower socioeconomic homes also may be sufficiently different to warrant our judgment that the test is inappropriate. We must avoid the notion that all minority or lower socioeconomic children are, by definition, significantly different from those in the standardization sample. This position is prejudicial and unwarranted. However, we must be sensitive to the fact that important difference exist with respect to child-rearing practices, expectations and aspirations, language experiences, an availability of and involvement in informal and formal learning experiences, and that these and other factors may result in acculturation patterns which are not directly comparable to those which are more typical in the United States. The decision as to whether a child's acculturation patterns are similar to those generally reflected in the test's standardization sample can be made individually and only after a thorough knowledge of the child's background (p. 28).

Although bias has long been equated with differences in race, ethnicity, and culture, identifiable inequity lies less in these factors than it does in unique patterns of experience that may include either varying levels of acculturation or English language proficiency or both. The structure and design of intelligence and cognitive ability tests and the construction of representative norm groups are based on the notions of equivalency in levels of acculturation for both the individuals on whom the test was standardized and on whom the test will be used. In the assessment of any individual in today's diverse society, the validity of this assumption must be carefully evaluated. According to Salvia and Ysseldyke (1991), a fundamental principle within test development relevant to notions of bias is called "assumption of comparability." They write:

> When we test students using a standardized device and compare them to a set of norms to get an index of their relative standing, we assume that the students we test are similar to those on whom the test was standardized; that is, we assume their acculturation is comparable, but not necessarily identical, to that of the students who made up the normative sample for the test. When a child's general background experiences differ from those of the children on whom a test was standardized, then the use of the norms of that test as an index for evaluating that child's current performance or for predicting future performances may be inappropriate (p. 18).

The biasing effect from the use of psychometric instruments, therefore, operates whenever tests of intelligence and cognitive ability (developed and normed in the United States) are given to individuals whose cultural background, experiences, and exposure are not similar to or consistent with that of the individuals comprising the norm group against whom performance will be compared. Tests will likely measure a lower range of ability in such diverse individuals because they sample only the cultural content related to mainstream experience and not the full or range of cultural content possessed by the individual, and incorrect inferences may be drawn (Valdés & Figueroa, 1994). Tests may not be psychometrically biased, but they are culturally loaded and linguistically demanding to varying degrees (Sattler, 1992). In citing Jensen (1980), Frisby (1998) comments that "it is more accurate to characterize tests as falling along a continuum from 'culture reduced' to 'culture specific' or 'culture loaded.'" The same may be said for experience with respect to language proficiency requirements. Tests can be placed along a continuum from language reduced (i.e., nonverbal) to language embedded (e.g., a test of oral vocabulary). At the very center of nondiscriminatory assessment lies the need to recognize that incorrect inferences may be made on the basis of test scores that reflect performance as a function of measured variables not related to actual ability or aptitude. Moreover, reduction of bias in the use of tests can come only from knowledge regarding where a given test lies along these continua.

Native Language Testing

Individuals involved in the assessment of linguistically diverse individuals should appreciate and recognize the difference between "bilingual assessment" and "assessment of bilinguals." The difference is not semantic, but rather represents two different research traditions that have concomitant differences in application for nondiscriminatory assessment.

Bilingual assessment implies an approach to assessment that is conducted in a bilingual manner whereas assessment of bilinguals does not necessarily seek to gather information in a bilingual manner. Tests like the Bilingual Verbal Abilities Test (BVAT; Muñoz-Sandoval, Cummins, Alvarado, & Ruef, 1998) should be recognized as real, technical advances in "bilingual assessment." Because this is an area of research that is relatively new, the underlying methods are neither complete nor without flaw. For example, despite the use of the term "bilingual" in its name, proficiency is still measured by the BVAT one language at a time which is quite different than the manner in which bilinguals are able to use both languages in an integrated manner (Bialystok, 1991; Grosjean, 1989). Aggregation of an individual's language abilities into a bilingual composite after being measured separately is unlikely to be the most accurate operationalization of what bilingual ability actually is, yet it does manage to surpass previous methods in this respect. True bilingual sampling of an individual with standardized tests remains to be accomplished. Nevertheless, in time and with sufficient empirical support, these approaches to assessment may prove to have greater accuracy in measurement or practical utility. Indeed, they stand at the forefront of a relatively new line of research.

Assessment of bilinguals is the line of inquiry where the vast majority of research and practice exists and it has been conducted almost exclusively with tests given in English to people with varying levels of English language proficiency but rarely in a systematic way (Cummins, 1984). Therefore, a great deal more is known about how people who are non-native English speakers will perform on standardized tests given in English, than is known about how they perform on tests given bilingually or in their native language. The use of translated tests with unknown technical characteristics or limited norm group samples (e.g., WISC-R-M, WISC-R-PR) has provided little insight into the performance of bilinguals. In the future, the emergence of outstanding native language tests with superior technical qualities (e.g., Bateria-R, Woodcock, & Muñoz-Sandoval, 1996) will serve as the vehicles by which this distinct research question is addressed.

The distinction between bilingual assessment and assessment of bilingual individuals carries important and distinct implications for nondiscriminatory practices. To engage in bilingual assessment, a psychologist must possess the requisite linguistic (and cultural) competency. Even when the competency requirement is met, the potential for bias is not fully diminished because there are no established procedures or guidelines to guide the process in a fair and equitable manner. How children growing up bilingual and bicultural in the United States should perform on tests that are normed on children raised in monolingual, single culture environments is unknown. Consequently, the vast majority of assessments to be conducted by psychologists will fall under the tradition of assessment of bilinguals, where the cultural and linguistic knowledge bases can be applied systematically within the context of a comprehensive framework for nondiscriminatory assessment.

BEST PRACTICES IN NONDISCRIMINATORY ASSESSMENT

Apart from the considerations that have been discussed, in order to draw valid and defensible inferences from assessment data, nondiscriminatory assessment practices should be multi-faceted and guided by a comprehensive framework that integrates efforts to reduce bias in a cohesive and systematic manner. For any such framework to prove useful it must be practical and easily accommodated within the school or other applied setting. The following framework is designed to meet these criteria and is offered as a reasonable and efficient means for accomplishing reduction in the various aspects of the assessment process and its various steps are summarized in Table 1. The framework represents an initial attempt to coalesce the more salient and promising procedures and recommendations for nondiscriminatory assessment offered by both researchers and practitioners in school psychology and related fields. The framework is both linear and recursive in that a return to already completed steps in the process may well be necessary as new data are uncovered and new hypotheses formed, evaluated, and re-evaluated. The framework accommodates both individual and assessment team activities. Collaborative assessment, where members of an assessment team (including parents) work together and where information is shared and decisions rendered jointly, significantly improves the likelihood of success of any and all nondiscriminatory efforts.

Table 1. A comprehensive framework for nondiscriminatory assessment

1. Assess and evaluate the learning ecology.
2. Assess and evaluate language proficiency.
3. Assess and evaluate opportunity for learning.
4. Assess and evaluate educationally relevant cultural and linguistic factors.
5. Evaluate, revise, and re-test hypotheses.
6. Determine the need for and language(s) of assessment.
7. Reduce bias in traditional testing practices.
8. Utilize authentic and alternative assessment procedures.
9. Evaluate and interpret all data within the context of the learning ecology.
10. Link assessment to intervention.

1. Assess and evaluate the learning ecology. School psychologists should recognize that there exist an infinite number of reasons why any given individual is having learning difficulties and that intrinsic factors form only a small fraction of these possibilities. Nondiscriminatory evaluation begins with directing initial assessment efforts toward exploration of the extrinsic causes that might be related to any observed learning difficulties. Hypotheses should be developed that revolve around the individual's unique experiential background within the context of the learning environment. When assessment is conducted on culturally and linguistically diverse individuals, in particular, there are many reasons related to these experiential factors that can adversely affect classroom performance or behavior.

Very often it is the systemic interaction between these factors and those that exist in the learning environment that simply do not or are not able to accommodate them that creates a mismatch between instruction delivered and instruction needed. Although cultural or linguistic differences are probably two of the most common factors that are evaluated relative to the learning ecology, they are by no means the only ones and the learning ecology should not be ignored simply because a student's background is not characterized by diversity on these two dimensions. In addition, a student's learning ecology should not be thought of as being restricted solely to the classroom environment. Although focus on the classroom environment is central to the evaluation of learning problems, students learn a great many things in contexts other than the classroom. Comparison of behavior, performance, or functioning between these contexts (e.g., physical education, non-academic instruction, recess, home, community) is crucial in conducting nondiscriminatory assessment.

Data that inform evaluation of hypotheses related to ecological and systemic factors may be obtained via a variety of methods, including review of educational records, direct observation of instruction and teaching, review of the content, level, relevancy and appropriateness of the curriculum, analysis of the match between the curriculum and the student's needs, interview with parents, teachers, or the individual, and medical records. Often culture and its concomitant experiences most dictate the unique history of an individual but they should not be equated to or measured simply by skin color or ethnic heritage. Evaluation of cultural difference should be viewed as examination of relatively unique circumstances or learning experiences that can not be considered comparable to the experiences of individuals raised in the U.S. mainstream. Some examples that may be consistent with this definition include poverty, deafness or other disability, bicultural students, students with childhood trauma or abuse, and students from dysfunctional families. Although culture tends to be the major factor that influences an individual's development, it need not be thought of as being neatly circumscribed. Evaluation of the extent to which a student's experiences differ from that of mainstream students may not even be a function of culture, but simply the result of unusual or highly idiosyncratic experience. Specification of hypotheses should be "null based" (i.e., performance, behavior, or learning problems are due to extrinsic factors such as differences in experience, not intrinsic factors like ability) in order to prevent bias in the collection and interpretation of data.

2. Assess and evaluate language proficiency. In cases where the individual is a dual-language learner, it will be necessary to determine current levels of language proficiency in both languages, especially with respect to Basic Interpersonal Communicative Skills (BICS) and Cognitive Academic Language Proficiency (CALP) (see Cummins, 1984). This information is often necessary in order to properly evaluate many of the ecological elements of the learning context related to dual-language experiences. Questions regarding opportunity to learn, the level and manner of instruction, the curriculum's linguistic relevancy and appropriateness, expected level of functioning or performance relative to English language development, and others are answerable only with this information. Thus, knowledge of an individual's proficiency in each language is crucial to nondiscriminatory assessment and interpretation. It provides the required context within which academic difficulties can be properly evaluated and forms the basis for the development of instructional interventions that are appropriate linguistically. Such data are usually gathered through any one of the various, standardized language tests available on the market today. Of particular note is the BVAT (Muñoz-Sandoval et al., 1998), which is available in 15 different language versions. The data may already exist in school districts where there are bilingual or English as a Second Language (ESL) programs. If the information is available but is out of date (older than 6 months), then new data should be collected. The impact of language experiences is profound, particularly in the preschool and early primary grades, and exposure to a second language no matter how small can have a significant impact on patterns of academic performance and basic skills development or acquisition (Cummins, 1984; Krashen, 1985). As such the presence of a language other than English in the home should not be minimized in the face of even considerable exposure to the English language.

3. Assess and evaluate opportunity for learning. The school setting provides perhaps the most significant context for learning. However, it is by no means perfect, and an individual may become a "casualty" of the educational system's failure to provide an effective or appropriate instructional program. The educational institution itself, including the curriculum, personnel, policies, and even the instructional setting, must be carefully evaluated to determine whether the individual has been provided with adequate "opportunity to learn" particularly in the case where significant cultural or linguistic differences exist. Again, the usual methods for collecting this type of data include evaluation of classroom environment and teaching methods, direct observation of academic performance, review of the content, level, relevancy and appropriateness of the curriculum, analysis of the match between the curriculum and the student's needs, interviews with parents, current and previous teachers, interview with the individual, and review of existing educational records and progress reports. Specific factors that should be examined include: regularity of school attendance; experience with the school environment and setting; match between individual's native language and the language of instruction; parent's ability to support language of instruction; years (duration) of instruction in the native language and English; quality of native language and English instruction in ESL or bilingual programs; cultural relevance of the curriculum; frequency of changes in schools; relative consistency in and across curricula; teaching strategies, styles, attitudes, expectations; system attitude regarding dual language learners; and socialization with peers versus isolation from peers.

4. Assess and evaluate educationally relevant cultural and linguistic factors. Learning does not take place only in school but occurs throughout the broad scope of an individual's complete social milieu. Many factors outside and apart from the educational setting can significantly affect the learning process, and careful evaluation of the extent to which such factors might be present and might be affecting learning in the school is necessary in order to evaluate data from a nondiscriminatory standpoint. In cases where the individual is culturally or linguistically diverse, it will be necessary to assess and evaluate the experiential aspects of these particular variables and their relative influence on school-based learning, language development, and educational progress. The effect of small amounts of exposure to two or more cultures or languages during early childhood development may create circumstances that cause the individual to have experiences that differ markedly from that of other individuals within the U.S. mainstream and that can negatively affect school performance. In short, the ability to draw valid conclusions regarding school dysfunction from the whole of assessment data rests squarely on proper identification and understanding of the individual's total linguistic history as well as other factors that may have influenced the development of both languages. This information is most commonly collected via observations across multiple settings, interviews with parents, teachers, and the individual, and review of existing educational records. Additionally, home visits are particularly effective for gathering this type of data. Factors that should specifically be examined include: current language(s) of the home, the individual's initial or primary language, the individual's total informal experience with the native language and English, individual's birth order or relative impact of siblings and their language development, individual's fluency in the native language and English, individual's and parent's level of acculturation, parent's fluency in the native language and English, parent's level of literacy in the native language and English, parent's level of education, and parent's socio-economic status.

*5. **Evaluate, revise, and re-test hypotheses.*** School psychologists should ensure that all reasonable and viable factors that could be related to an individual's observed learning difficulties have been thoroughly evaluated and ruled out as the "primary" cause of them. Within the school setting, it is only when enough confidence exists in the belief that there are no plausible or demonstrable external factors that can account for an individual's learning difficulties and that consideration of possible intrinsic factors should be entertained. This is necessary primarily to reduce confirmatory bias. Additionally, there should also be evidence that systematic and appropriate efforts to improve the student's classroom performance were undertaken but proved to be unsuccessful. The litmus test here is whether there is one or a combination of external factors present that can be reasonably presumed to be the primary cause of the individual's learning difficulties. If so, then the null hypothesis regarding normal behavior, performance, or average functioning (albeit, inhibited by the identified external constraints) should be maintained and the individual's learning problems should not be ascribed to intrinsic factors. The reduction of potentially discriminatory attributions regarding learning, behavior, or performance is further attenuated by returning to the development of additional interventions to address academic need within the classroom setting. In some cases, however, external factors may be present, but might only be contributing to and not directly causing the student's observed learning problems. When difficulties learning in the classroom setting or behavioral problems can not be reasonably ascribed to the primary influence of any such extrinsic factors, assessment may proceed appropriately to explore potential intrinsic factors with confidence that the process is operating in a fair and equitable manner.

*6. **Determine the need for and language(s) of assessment.*** The course of assessment may be significantly affected in cases where the individual is not a native English speaker (e.g., is limited English proficient) or uses an alternative mode of communication. This is particularly true for special education evaluations where IDEA mandates that assessors consider the individual's primary language ability (in addition to his or her ability in English) in the development of the assessment plan (§§300.532-330.534(b)). As assessment moves logically toward the use of standardized tests it becomes important to recognize that testing need not be conducted solely in the primary language or English. Moreover, nothing in IDEA or any other regulatory guideline mandates "parallel" testing in both languages. Exactly what should be assessed and in what language it will be assessed are decisions that rest with the assessor or assessment team. Factors that affect the selection of linguistically appropriate tools and techniques come from examination and review of existing pre-referral data, the unique background variables of the individual, and relevant referral concerns. Because each case is unique, and because the foundation of IDEA rests on the notion of "individualization" in both evaluation and instruction, it is inappropriate to make specific guidelines or rules with respect to decisions about the most appropriate language or combination of languages for testing. Within the framework of nondiscriminatory assessment, these decisions may be guided by the following general statements that represent only the most basic of guidelines: (a) individuals who are not proficient in English should be assessed in their primary language or native mode of communication in addition to any English language testing that may be appropriate; (b) individuals who are proficient in English may be assessed in their primary language or native mode of communication in addition to any English language testing that may be appropriate; and (c) all individuals, whether proficient in English or not, whose histories and backgrounds are not comparable to the U.S.

mainstream, should be evaluated by an assessor who possesses knowledge regarding the factors relevant to the individual's unique experiences and how they may affect learning and development.

A criticism often leveled at nondiscriminatory assessment suggests that it is not practical and involves considerable expenditures in terms of time and effort. To the contrary, the six steps that have already been delineated above can be accomplished well within the scope of any pre-referral intervention and assistance process. Use of a pre-referral process coupled with attendance at such meetings by professionals with the relevant knowledge and competencies (school psychologists are very well suited for this role) creates a system that is highly efficient by eliminating time wasted conducting inappropriate evaluations. Not only does creation and involvement in an effective pre-referral process reduce time and effort spent in evaluations, but it also helps to streamline compliance with legal mandates by facilitating scheduling and documentation. Nondiscriminatory assessment need not wait to begin upon formal referral.

*7. **Reduce bias in traditional testing practices.*** As discussed previously, bias in traditional testing occurs primarily when individuals whose backgrounds and experiences differ significantly from those on whom the test was normed. This is not an uncommon situation, and the issues of acculturation and English language proficiency significantly affect the validity of interpretations drawn from results of performance on such tests. Even where native language tests are available, potential bias remains. The process of nondiscriminatory assessment in using tests is represented by two distinct options: (a) administer tests in a standardized way and attempt to evaluate the results in a nondiscriminatory manner or (b) modify the testing process in a way that is less discriminatory initially.

In pursuing the first option, maintaining standardization has the advantage of allowing application of systematic methods for reducing bias. This includes use of existing (Mercer, 1979) or locally developed pluralistic norms that provide more appropriate comparison groups or use of information regarding the linguistic demand and cultural loading dimensions of the tests given (Flanagan, McGrew, & Ortiz, 2000; Flanagan & Ortiz, 2001; Ortiz & Flanagan, 1998). Because there is considerable research surrounding the nature and manner in which various groups of diverse individuals perform on a wide range of available English language tests, maintaining standardization provides a foundation for nondiscriminatory assessment based directly on this body of empirical evidence. The CHC Culture-Language Matrix developed by Flanagan and Ortiz (2001) capitalizes directly on this research and provides practitioners with a systematic method that can assist in determining the relative impact of cultural and linguistic differences on test performance. Deviations from standardization would produce results that are unknown and unpredictable, as does use of native language tests for which an extensive literature base does not exist. Both approaches within this option provide the means for basing interpretation relative to more representative peers as well as expected patterns of performance as a function of acculturation and language proficiency. Moreover, knowledge of test properties relative to cultural loading and linguistic demand creates a basis for test selection that may also be less discriminatory without violating standardization.

The second option in using standardized tests involves modification and adaptation in ways that attempt to reduce acculturative or linguistic bias directly. Any such modifications, however, represent significant violations of standardization and automatically impugn the validity and interpretability of obtained results. The major drawback in applying modifications is the elimination of empirically established baselines for comparison or performance. Unlike performance on tests administered in English following standardization, how much any given modification or adaptation affects performance is not well known or defined. Consequently, the major benefit that may be derived in using tests in non-standardized may rest more in the collection of qualitative versus quantitative data. Even in this respect administration and scoring should remain systematic.

Standardized norm-referenced tests, both in English and the native language, can be modified in a variety of ways including bilingual administration, use of extended and expanded instructions on sample items, mediation of concepts to ensure comprehension prior to administration of items, repetition of items to facilitate comprehension, extension or elimination of time limits, acceptance of alternative responses (e.g., in a different language, culture-specific responses, through non-verbal gestures), and additional probing and querying of incorrect responses. When carefully adapted and interpreted within the context of the individual's unique experiential background, the use of standardized tests can provide valuable qualitative information about functioning. Such data are often much more useful in instructional planning than the quantitative results that are derived. Despite the limitations, use of tests as tools that provide rich clinical or behavioral information should not be discounted as a basis for drawing less discriminatory inferences about ability or performance.

8. Utilize authentic and alternative assessment procedures. Nondiscriminatory assessment represents a collection of related and systematic procedures designed to reduce bias and implies the collection of a broad range of information. Non-standardized methods and information should not be excluded from the process. Whereas standardized, norm-referenced tests are driven mainly by questions and needs related to classification, diagnosis, and legal eligibility, authentic assessment is geared more toward answering questions regarding instructional needs and interventions—something that standardized tests do not address well. Examples of such procedures and methods include informal analysis of work samples, curriculum or criterion based measurement, performance-based assessment, portfolio assessment, and various test-teach-test frameworks such as dynamic assessment (Fischer & King, 1995).

When properly applied, non-standardized, alternative assessment strategies can provide valuable information especially in school-based and special education evaluations. In educational settings, authentic assessment often utilizes material that has already been provided through direct instruction. Evaluation of learning and performance through use of the curriculum-based materials and content reflects an authentic nondiscriminatory approach. Accordingly, comprehensive assessment should include information and data obtained through such methods. Examples include curriculum-based assessment or authentic measures of academic achievement and skill development, performance-based assessment that evaluates more by task completion within context than answering of factual questions out of context, criterion-referenced assessment using minimum levels or standards of performance, portfolio assessment that documents development of skills learning and academic progress, informal analysis of actual work completed in the classroom setting, symbolic dynamic assessment of learning propensity using abstract stimuli, and authentic dynamic assessment of learning propensity using actual materials from the curriculum. Dynamic assessment is a particularly useful culture-reduced method that can be accomplished by using a wide variety of materials that provides relevant and useful information about performance that is directly applicable to instructional intervention and planning (Lidz, 1997).

9. Evaluate and interpret all data within the context of the learning ecology. All data collected in the course of nondiscriminatory assessment should be evaluated in an integrated manner utilizing the information obtained regarding the student's unique experience and background as the appropriate context. Knowledge of factors that may have played a part in creating significant differences between the experiences of the individual in terms of acculturation or language development provides the least discriminatory framework with which to evaluate and assign meaning to the patterns seen in the data. Although less obvious and more difficult to judge, information related to differences in acculturation are every bit as important as the more overt differences seen in language, and should not be minimized or ignored. Very often the meaning of the data will depend in large part on an understanding of the environmental influences (generally most associated with cultural and linguistic differences) that have transpired to shape the individual in unique ways and set the stage for observed and measured performance. In the final analysis, successful nondiscriminatory assessment is contingent upon application of this information. An effective method for ensuring equity in this process is based on the notion of convergence. The data collected in the course of assessment should cut across procedure or method and come together in a cohesive and convincing manner that supports the plausibility of final conclusions. Although in practice, a preponderance of evidence would be sufficient to provide validity to conclusions, care should be taken not to assign unwarranted importance or significance to any single piece of information or datum. Use of single scores, combinations or products of scores, and unduly favoring certain data over other data will lead to discriminatory inferences and outcomes. Equivocal data support the null hypothesis that functioning is within normal limits and that any observed difficulties are the result of factors other than internal disability.

10. Link assessment to intervention. Assessment and evaluation are not interventions. Even when an individual has been assessed and it has been determined that no disability exists, the original problems that prompted the referral do not cease to exist automatically. Similarly, that a disability has been correctly identified does not make the best or most appropriate remedial methods instantly apparent. Assessment of any kind, nondiscriminatory included, is of little value unless it can be extended to incorporate appropriate interventions and treatment options. In school-based evaluations, modifications to the instructional program and the provision of specific remedial strategies are necessary whether the individual qualifies for special education services or not. Because the process of nondiscriminatory assessment has generated information regarding both relative performance as well as causal and contributory factors, it has considerable value in guiding the development of appropriate interventions and treatment strategies. As with use of the hypothesis-driven approach, awareness of the need to link assessment to intervention significantly affects the manner in which activities are conducted and the type of data that are collected. Failure to generate data for the purpose of intervention can be construed as the most discriminatory aspect of assessment as it affects all individuals equally.

SUMMARY

No assessment is unbiased and no evaluation can ever be wholly nondiscriminatory. Attempts to be completely unbiased are doomed to failure. A more practical approach is to recognize the various sources of potential bias and use systematic procedures that will reduce it as much as possible. Nondiscriminatory assessment is not limited to individuals who are distinct from the cultural or linguistic mainstream. Rather, in keeping with the egalitarian implications of its name, nondiscriminatory assessment can provide fair and equitable evaluation of any individual regardless of background. Nondiscriminatory assessment is not a single tool or procedure that is applied in isolation or without consideration of differences in individual experience and development. It is a collection of activities brought together in comprehensive fashion and used in a systematic way to address a variety of issues related to bias or discrimination. Nondiscriminatory assessment is broad and includes a wide variety of data generated from review of records, interviews, observations, standardized tests, and authentic methods. Bias is not a function of technical or psychometric deficiencies in tests but rather differences in experience between an individual taking the test and the individuals on whom the test was normed. Differences in race, ethnicity, or culture do not always reflect significant experiential differences. Direct training and education in nondiscriminatory assessment assists in drawing fair and correct inferences regarding patterns of, and reasons for, learning or behavior problems. There is no one right way to reduce bias, and there are no strict procedural specifications for which adherence is required. Nondiscriminatory assessment is, however, best carried out within the provisions of an overarching framework that brings bias reduction procedures together in a cohesive and logical manner and which assists not only in interpreting data fairly but also the collection of data in ways that are similarly less biased. Additionally, testing hypotheses regarding factors that are not child-centered but rather problem-centered and which affirm normality assists in reducing the discriminatory aspects of assessment and leads directly to the development of appropriate interventions. A general framework for nondiscriminatory assessment that achieves these goals was proposed. The process outlined in the previous section provides a structure whereby more than half of the components essential to nondiscriminatory assessment can be accomplished within the scope of general education and prereferral activities. These activities provide data that inform the development of appropriate instructional interventions and guides subsequent assessment activities. Should assessment of learning or behavioral difficulties proceed to formal evaluation of the presence of an underlying disability, the remaining components in nondiscriminatory assessment that are often required in such cases can be completed efficiently in approximately the same amount of time and with no more effort than would be required in any other type of assessment. Ultimately, nondiscriminatory assessment should be "undertaken with the intentions of improving children's development and helping persons make wise and informed decisions" (Oakland, 1976, p. 3). When data collection and interpretation are guided by responsive methods embedded in a systematic framework, the likelihood of fair and equitable decisions are increased.

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Sandoval, J., Frisby, C. L., Geisinger, K. F., Scheuneman, J. D., & Grenier, J. R. (Eds.). (1998). *Test interpretation and diversity: Achieving equity in assessment.* Washington, DC: American Psychological Association.
This is perhaps the most up-to-date and comprehensive volume on equitable assessment. The chapters are written by leading researchers who present a broad range of issues involving diversity with a balanced perspective and attention toward practical issues.

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This volume is the definitive treatise on the issue of bias in the assessment of culturally and linguistically diverse children. Although not intended as a guide to assessment, the extensive review of empirical findings, judicial influences, and recommendations for assessment are crucial to the complete understanding of issues of bias.

83 Best Practices in Intellectual Assessment

Daniel J. Reschly
Vanderbilt University
Jeffrey P. Grimes
Heartland Area Education Agency 11

OVERVIEW

School psychology was born in the prison of the IQ test. A prominent American psychologist in a commentary advanced this controversial thesis on school psychology over 25 years ago (Sarason, 1975). In this chapter, the appropriate role for intellectual assessment will be considered as school psychology emerges from this prison. Although our analysis will suggest a diminished role for intellectual assessment in the future, we recognize the necessity of best practices when intellectual assessments are conducted because these results typically are used in crucial decisions about children and youth.

Surveys over the last 50 years have verified the importance of assessment in general and the key role of intellectual assessment in particular regarding school psychology roles. Although there is increasing evidence for greater diversity in assessment practices and some school psychologists and the systems in which they work have abandoned intellectual assessment entirely, typical school psychologists at the turn of the century continue to use individually administered, standardized tests of intellectual functioning several times per week in their practice (Hosp & Reschly, in press; Reschly, 2000a). The changes over the last 25 years suggest, at best, the possibility that school psychology may be on parole from the prison of IQ tests. There are several reasons for the prominence of the IQ test in the history of school psychology.

Historical Influences

History is a powerful influence on current school psychology roles (Fagan, 1992). The earliest roots of school psychology were in a university-based clinic where psychological studies of children with learning problems were conducted. As school psychology developed from these early roots, services were provided most often by itinerant professionals in clinic-like settings, that is, children were brought to psychologists who studied them individually *outside* of the natural setting in which behaviors of concern occurred. This pattern of service continues today. Standardized measures of intelligence and achievement are administered today in clinic-like settings, outside of natural classroom and home environments, as part of evaluations to estimate expected level of achievement, make inferences about the cause(s) low achievement, and determine eligibility for disability diagnosis (e. g., learning disability) and special education placement. Each of these uses of intellectual assessment has become increasingly controversial over the last decade.

Graduate Education

The clinic-like practice established in the early roots of school psychology was and is reinforced by much of graduate education in which individually administered measures of intellectual assessment are taught first and more thoroughly than any other kind of assessment or intervention competency. This occurs despite the nearly universal claim by graduate program faculty that intellectual assessment is but one of many emphases in programs and that other competencies are equally important. Nevertheless, what is taught first and most thoroughly has a powerful influence on students and future practice. Our impression is that some programs today, perhaps 15–20%, a proportion that we think is increasing, truly do provide as much or more emphasis on other assessment and intervention competencies. For the majority, however, cognitive assessment dominates other competencies

Legal Regulations

Arguably, legal requirements are the most important single influence on school psychology practice today (Reschly, 2000a, 2000b). Legal requirements are a two-edged sword in that they have established in most places a secure funding base for school psychology. The other edge of the sword is that the highest priority service according to many school officials is the determination of eligibility for special education services. A full and individual evaluation (legal language), comprehensive case study or comprehensive evaluation (school psychology language), is guaranteed to every student considered for special education placement. Moreover the evaluation must meet certain crucial criteria that are specified in the Protection in Evaluation and Eligibility Determination regulations of federal law (Individuals with Disabilities Education Act (IDEA)1997, 1999). In most states school psychologists have key and, often, dominant roles in conducting the mandated full and individual evaluation.

Compliance with legal requirements is an ethical obligation. The meaning of many legal requirements, however, is ambiguous. For example, consider the following provision from federal law. "The child is assessed in all areas related to the suspected disability, including, *if appropriate*, health, vision, hearing, social and emotional status, general intelligence, academic performance, communicative status, and motor abilities" (IDEA, 1997, 1999) (emphasis added). The words "if appropriate" are crucial in this regulation. Professional judgment must be exercised in designing an *individual* evaluation, including whether information on general intellectual functioning is needed. For many cases referred to school psychologists, intellectual assessment is not needed while other domains of behavior and other assessment approaches yield information that is more relevant to referral issues.

Classification Criteria

Legal requirements for classification criteria exert vast influences on whether intellectual assessment is needed in full and individual evaluations. Most states have legal requirements that define learning disability (LD) and mental retardation (MR) in ways that necessitate intellectual assessment information (Mercer, Jordan, Allsopp, & Mercer, 1996; Luckusson et al., 1992). A substantial proportion of the use of intellectual assessment measures today occurs in the context of determining whether referred students meet the classification criteria for MR or LD. If the classification criteria change for LD or MR, or if states move to non-categorical, functional assessment systems, then the need for intellectual assessment is likely to change significantly.

Progress has occurred in efforts to reconceptualize MR in terms of functional skills and necessary supportive services (Luckusson et al., 1992); however, these alternatives are not sufficiently well developed to replace IQ testing in the MR diagnosis in schools and other settings. We expect that intellectual assessment will continue to be a major component of MR classification criteria in contexts that use disability categories such as the Social Security Administration and the courts. The situation in LD, which constitutes over half of all comprehensive individual evaluations by school psychologists, is markedly different. Current thought among the leading reading disability researchers contends that the widely used IQ-achievement discrepancy method of determining LD classification is invalid and harmful to many children (Fletcher et al., 1998). Fletcher et al. (1998) concluded:

> Classifications of children as discrepant versus low-achievement lack discriminative validity.... However, because children can be validly identified on the basis of a low-achievement definition, it simply is not necessary to use an IQ test to identify children as learning disabled (p. 200).

Fletcher and colleagues strongly advocate the use of direct measures of reading and language skills, particularly phonemic awareness, and the elimination of IQ in the diagnosis of LD. Elimination of IQ as part of the LD full and individual evaluations would have an enormous impact that could be extremely positive or extremely negative depending on the degree to which alternative assessment and decision-making approaches are mastered and adopted by school psychologists. On the one hand these changes could liberate school psychology from the prison of the IQ test, clearing the way for more effective roles that have a more direct positive impact on children and youth. Resistance to change in intellectual assessment requirements as LD classification is brought more in line with research could, on the other hand, increasingly isolate school psychologists from the cutting edge of developments in services to students with learning and behavior problems. The next decade is likely to be very challenging to our profession as we leave old and familiar methods behind that have undocumented benefits and embrace changes toward more effective practices.

Non-Categorical and Functional Assessment Systems

One way that intellectual assessment is likely to decline is through changes in classification criteria, especially in LD. Another avenue of change has occurred and, we think, will expand, involving reform of special education and school psychology through changes in the overall special education classification/placement system accompanied by commitments to enhance the effectiveness of general and special education interventions (Reschly & Tilly, 1999; Reschly, Tilly, & Grimes, 1999;Tilly, Reschly, & Grimes, 1999). Although several versions of these basic reforms have been implemented in some districts in at least 20 states, and statewide in at least one state, a set of basic principles characterize all of these reforms (see Reschly & Ysseldyke, this volume).

The key reform principles involve less emphasis on disability categories to establish special education eligibility and more emphasis on direct measures of skills and behaviors in natural settings. Curriculum-based academic measures and behavioral assessment procedures are emphasized in these systems. Eligibility is determined in part by the existence of large differences between the student's level of performance and that of peers using direct, ecologically valid measures of performance in natural settings. Once low performance is documented, research-based interventions are designed, implemented, and evaluated to determine the degree to which specialized instruction and additional resources are needed to produce significant improvements in performance (Tilly et al., 1999; Tilly, this volume). Special education eligibility occurs when there is a large performance gap between current level of performance and grade/age expectations *and* the resources required to produce an effective intervention are beyond the scope of general education.

As reform plans are implemented, we anticipate declining use of intellectual assessment. The current pattern of administration of an intellectual assessment measure several times each week already has changed for some school psychologists and, we think, will change for many more school psychologists in the next decade due to system reforms and changes in LD classification criteria. It is likely that intellectual assessment will continue in MR and, perhaps, as part of the comprehensive individual evaluations of a limited number of other students. When used, intellectual assessment must be carried out in ways that are consistent with theory, research, and best professional practices. It is to these topics that the rest of the chapter is devoted.

BASIC CONSIDERATIONS

The voluminous literature pertaining to intellectual assessment cannot be reviewed in detail in this chapter. Thousands of journal articles, hundreds of book chapters, and scores of books have been written on topics related to intellectual assessment. In this section of the chapter we will review only general findings that relate directly to best practice considerations. Readers are referred to other sources for further information on theories of intelligence, developmental patterns, and reliability and validity of instruments, and group differences (Flanagan, Genshaft, & Harrison, 1997; Neisser, 1998; Sattler, 2001; Sternberg, 1994).

Nature of Current Measures

The intellectual measures used most frequently in school psychology are composed of a variety of complex tasks ranging from items requiring simple memory to abstract problem solving. Until recently, nearly all were theoretical in the sense that the items and scales were not derived from applications of theories of cognitive development or information processing. Several recently developed tests are derived from theory, although it is too early to determine if these tests will be used frequently by school psychologists (Naglieri & Das, 1997a; Woodcock & McGrew, 2000). Most analyses of the psychometric structure of the new and traditional tests such as the Wechsler Scales and the Stanford-Binet yield a general factor, not unlike the concept of Spearman's "g," with one to four group factors (Kranzler & Keith, 1999). Interpretations of scores beyond the composite or overall score and two or three group factor scores typically are less reliable and often invalid.

Meaning of Current Measures

Academic Performance

Intellectual measures are useful because of their relationship to other critical indices of human functioning. The most common use is to attempt to estimate likely level of performance in educational settings or to attempt to identify causes of poor school performance. This use of intellectual measures is supported by the well-known substantial correlation between intellectual functioning and school achievement. This relationship, ranging from a correlation of about .4 to about .7 depending on the achievement criterion measure, reflects a substantial, but by no means perfect, association between intellectual functioning and school performance.

Occupational attainment

Intellectual measures are also correlated with occupational attainment. Although there is a broad range of ability associated with each occupational category (e.g., attorney or carpenter), there is a clear relationship with the average level of ability in occupational categories. Generally, the more prestigious the occupation the higher the average level of ability. This fundamental relationship rarely has direct applicability to school psychology decision making.

Cognitive Processes

Performance on intellectual measures is also related to a variety of indices of cognitive processing. The classic Campione, Brown, and Ferrara (1982) chapter summarized evidence that performance on intellectual measures is positively related to the speed and efficiency of information processing, to the individual's knowledge base, to the spontaneous use of appropriate strategies in problem solving tasks, to metacognitive operations whereby the individual exerts control over approaches to problem solving, and to the transfer of problem solving skills to novel situations.

Perhaps the most salient result in the Campione et al. (1982) review was the interpretation of intellectual differences in terms of the capability of profiting from incomplete instruction. In general, the higher the level of measured ability, the greater the individual's capability of learning through indirect or incomplete instruction. The latter bears strong relationships to the concept of incidental learning, cited earlier as the process through which much of the knowledge or problem solving strategies on intellectual measures are learned.

Measured Intelligence Versus Intelligent Behavior

The discrepancy between what is assessed on intellectual measures and effective, intelligent behavior has been recognized for many decades. In a 1921 symposium on the meaning of intelligence, E. L. Thorndike suggested three major facets of intelligence: social, mechanical (practical), and abstract thinking. He noted that the tests at that time, like most current measures, focused primarily on abstract thinking (Intelligence and its measurement, A Symposium, 1921). A similar insight was offered by David Wechsler in his emphasis on intelligent behavior as the overall capacity to think rationally, act purposely, and deal effectively with the environment (Wechsler, 1955). Sternberg (1985) has identified different components of intelligent behavior including social and practical intelligence (an aspect of which is tacit knowledge).

The above formulations recognize the distinction between what is measured on current measures and intelligent behavior. Intelligent behavior, if defined simply as the effectiveness in dealing with the environment, clearly involves a variety of intellectual and nonintellectual competencies. The IQ score from a well-standardized instrument such as one of the Wechsler scales represents some, but by no means all, of these competencies. It is critical for users of measures of general intellectual functioning to understand this distinction and to communicate the distinction to consumers of test result, (i.e., students, teachers, and parents). As Wechsler pointed out, a high level of measured intelligence, perhaps reflecting primarily abstract thinking capabilities, is rendered quite useless in the absence of goal-directedness, motivation, persistence, or sufficient emotional stability to allow concentrated effort.

Variations in Performance: Intra-Individual Differences

Intellectual measures are designed to identify individual differences. Two perspectives can be used in examining these variations: (a) intra-individual differences involve variations within the individual over different tasks or items and (b) inter-individual differences involving variations between persons on the same tasks or items. Both types of differences have been used widely in intellectual assessment.

Intra-individual differences over subtests have often been used in making diagnostic decisions about individuals. For example, it was widely believed that larger subtest variations or unique patterns were typical of persons with various disabilities or neuropsychological deficits. It turns out that these assertions were and are still almost certain to be incorrect because a high degree of variation across item types or tasks is typical of normal persons; that is, profile scatter is typical of normal individuals (Macmann & Barnett, 1997; McDermott, Fantuzzo, & Glutting, 1992; McDermott, Fantuzzo, Glutting, Watkins, & Baggaley, 1992; Sattler, 2001). If large subtest differences or verbal-performance scale differences occur frequently, then it is a statistical impossibility for subtest patterns to be a unique or defining characteristic of a disorder or neurological deficit that presumably occurs infrequently.

Difference scores are nearly always less reliable than the separate scores on which the difference is based. This fact explains to a large degree why the intra-individual differences used in profile or scatter analysis are not useful bases for diagnoses or specification of treatment. If the reason for difference scores being less reliable is not immediately apparent, then consider this analogy. If one is uncertain about when a vacation period begins and also uncertain about when the vacation ends, then, there must be even greater uncertainty about the length of the vacation. Similarly, if we are somewhat uncertain of the individual's short-term memory score since it is not perfectly reliable and, also, somewhat uncertain about the individual's auditory processing score for the same reason, then we are, by necessity, even less certain of the difference between the two scores.

Norms for subtest and scale differences are available for the most widely used tests (Sattler, 2001). The norms often are organized around the size of the difference between two scores that is statistically significant at the .05 or .01 levels. These results are widely misunderstood. For example, on a Wechsler scale the Verbal-Performance Scale difference of about 15 points is statistically significant at the .01 level. Does this mean that only 1% of the standardization sample obtained Verbal and Performance scores at that magnitude of difference? No! In fact, nearly 25% of persons in the standardization obtained Verbal and Performance scores that were different by 15 points or more. The statistical significance indicates the likelihood that a difference of that magnitude would occur by chance. The .01 or .05 levels indicate that the difference is likely to be real, not whether the difference is unusual or unique. It is essential to keep in mind that real differences in score profiles do occur frequently.

Developmental Changes

The performance of individuals also varies over time. IQ test results are relatively stable for most individuals after approximately age 5–7; however, the IQ scores for a significant percentage of individuals (at least 20%) change by 15 points or more between age 6 and maturity, and considerably larger changes of 30 or 40 points have been reported in a few cases. When large changes do occur, they tend to be associated with significant changes in the individual's environment or overall adjustment (McCall, Apelbaum, & Hogarty, 1973). The fact that IQ test results do change as a function of changes in the individual or the environment can be seen as evidence to support the most common interpretation of test results as reflecting *current* intellectual functioning. We need to be conscious of the fact, and inform others, that scores do change, and that inferences about future intellectual status of the individual are tentative.

Measures of Cognitive Processes

As noted earlier, well-standardized intellectual measures reflecting theoretical formulations of cognitive processes appeared recently, sometimes accompanied by claims that the processes should be used as intervention targets (e.g., Naglieri & Das, 1997b), as a means to prescribe instructional methodology (Kaufman & Kaufman, 1983; Reynolds, 1992), or to provide a more complete description of cognitive abilities (Woodcock & McGrew, 2000). The assertions regarding the value to academic achievement of training weak cognitive processes or matching teaching methodology to presumed cognitive or neurological strengths typically do not have any empirical support (Kavale & Forness, 1999). In other cases exaggerated claims are made on the basis of studies with weak methodologies and very small sample sizes (e.g., Naglieri & Johnson, 2000). Although these notions are intuitively attractive, there is little evidence to date that their application confers benefits to children.

A second use of cognitive process measures is represented by dynamic assessment procedures that attempt to identify strengths and weaknesses in the individual's problem solving strategies. Attempts are then made to overcome deficits in strategies through direct cognitive training (Lidz, 1987). Thus far, dynamic assessment and cognitive training have not had much impact on the practice of school psychology in part because the dynamic assessment procedures have not been well standardized and the effectiveness of interventions related to improving cognitive processing are as yet unproven.

Inter-Individual Differences

The central purpose in most administrations of individual IQ tests is to determine how the individual performs in relation to a group of persons with similar characteristics. The standard scores and percentile ranks that give meaning to the performance and form the basis for the interpretation are based on the normative group. Obviously, the quality of the norms is crucial to the usefulness of the test. When we interpret the performance of individuals using the common scores such as IQs and percentile ranks, we are implicitly concluding that the normative group on which these scores were based constituted an appropriate comparison group for that individual. Careful consideration of whether that group is appropriate is crucial to accurate interpretation of measures of intellectual performance.

Perhaps the most controversial finding related to intellectual assessment is that sociocultural groups differ in level and pattern of performance on measures of standardized tests. These findings have appeared for many years (Kaufman & Doppelt, 1976; College Board, 1999; Smith et al., 1995). The variations in level typically are confounded with group differences in socioeconomic status, rendering difficult interpretation of the source(s) of level and pattern differences. For that reason, we urge extreme caution in attributing causality to group differences as well as additional care in interpreting the results of intellectual test performance for persons from groups that are culturally different or economically disadvantaged. We note with favor Mercer's (1979) excellent discussion of conditions that must be met before attributing intellectual test differences to hereditary causes. In fact, those criteria cannot be met for individuals, and estimations of their effects for groups are fraught with many possible sources of error. For these reasons, we strongly admonish against making inferences about causation in our everyday interpretations of inter-individual differences on measures of intellectual functioning.

Bias and Litigation

Allegations of bias against minority students are perhaps the most controversial and unresolved issues regarding the use of IQ measures by school psychologists. Considerable research was devoted to topics of bias in the 1970s and 1980s. The voluminous results generated from this research led to complex conclusions about intellectual assessment with minority students (Reynolds, Lowe, & Saenz, 1999). First, there are multiple definitions of bias with varied meanings. The results of studies of bias depend heavily on the definition used. Definitions of bias include the following conceptions: (a) mean differences, (b) item bias, (c) psychometric characteristics of tests, (d) factor analysis of underlying test structure, (e) atmosphere or examiner/examinee interaction effects, (f) prediction, (g) selection ratios or disproportionate classification of students, and (h) social consequences, particularly use of test results to support racist interpretation of differences.

Most conventional tests are not biased according to the conventional definitions related to properties of items, psychometric characteristics, factor analysis, examiner-examinee effects, and prediction (Jensen, 1980; Reynolds et al., 1999). Specifically, there is no evidence that conventional tests underpredict the actual performance of minority students. Conventional tests typically are found to be biased on the less well accepted definitions such as mean differences, selection ratios-disproportionate classification, and social consequences.

The mean differences and disproportionate classification definitions, along with several conventional definitions, were key features of extremely costly and divisive litigation over the past 20 years. Four trials over these issues occurred in federal district courts between 1979 and 1986 (Reschly, Kicklighter, & McKee, 1988a, 1998b). Three of the trials concluded that conventional measures of intellectual functioning were not biased, despite overrepresentation of minority students in special education programs, *if* certain crucial standards were met; that is, (a) rigorous implementation of procedural safeguards in the referral, classification and placement process, (b) implementation of a multifactored assessment designed to identify specific educational needs by a group of professionals, and (c) classification, placement, and programming decisions made by a team that included professionals and parents. The initial *Larry P* (1979, 1986) decisions in California resulted in a ban on IQ tests with African-American students, but the most recent decisions in that case rescinded the IQ test bans (*Larry P.*, 1992, 1994). Nevertheless, the perception of unfairness to minorities persists for a number of reasons such as the concerns that different environments provide differential preparation for the test, narrow item content, and negative outcomes associated with the use of IQ tests. It is doubtful that IQ testing will ever be acceptable to many minority educators and social scientists regardless of the results of empirical studies of bias.

Treatment Validity

We anticipate considerably reduced use of intellectual assessment because the results of intellectual measures are not related closely to treatment selection, planning, or evaluation. Witt and Gresham's evaluation of the treatment validity of the most widely used scale summarizes our views on this matter: "In short, the WISC-R lacks treatment validity in that its use does not enhance remedial interventions for children who show specific academic skill deficiencies.... For a test to have treatment validity, it must lead to better treatments (i.e., better educational programs, teaching strategies, etc.)" (Witt & Gresham, 1985, p. 1717).

We acknowledge that others in school psychology whom we respect may disagree with our view on treatment validity, and we wish more space were available here for a full representation of our and their views. We note that the principal use of intellectual measures has been disabled child classification leading to placement in special education. We also refer the reader to Kavale and Forness' (1999) analysis of the efficacy of special education programs organized around disability labels. From these results, as well as the negative findings on matching instruction to cognitive or neuropsychological strengths, we have concluded that alternatives must be considered.

Appropriate Uses of Intellectual Assessment

Intellectual assessment may have a positive or negative impact on the individual depending on the context that leads to assessment and the outcomes of decisions made using intellectual assessment information. The importance of these context and outcome conditions was emphasized in a report of the National Research Council on equity in special education placement (Heller, Holtzman, & Messick, 1982). Consideration of alternatives to special education referral, classification, and placement and, if these steps are necessary, focusing on the outcomes of classification and placement, moves the discussion of bias beyond arguments about test items and prediction equations (Reschly, 1979; Reschly et al., 1988b). Consideration of alternatives and outcomes is the central focus of system reform efforts now underway.

CONTEXT

The typical context of intellectual assessment for school psychologists often involves determination of eligibility for possible special education classification and placement. A two-pronged classification-placement process is established in federal and state special education legislation: (a) determination of need for special education and (b) determination of eligibility for classification. All too often the eligibility determination, rather than the need for special education, is addressed in the multifactored assessment that precedes classification and placement.

The least restrictive environment (LRE) principle from federal and state legislation places emphasis on attempts to resolve problems and to provide necessary services in regular education settings. Application of this principle implies that intellectual assessment and eligibility determination should not be the first choice in efforts to address learning or behavior problems.

The first phase of a system within which intellectual assessment can be used appropriately involves concerted efforts to resolve problems in regular education settings. This phase must involve careful consideration of prior efforts to resolve the problem and systematic, high quality interventions. Intervention quality at the pre-referral stage, as indicated by the presence of essential features such as behavioral definition of the problem, collection of baseline data, design of systematic interventions, and intervention implementation, monitoring, and evaluation, typically is very poor. School psychologists have critical roles and essential contributions to ensuring the delivery of high quality pre-referral interventions (Tilly, this volume).

CHOICE OF MEASURE AND DECISION MAKING

If the problem behavior is pervasive and persistent, and beyond the purview of regular education, even with high quality pre-referral interventions, then consideration of special education eligibility is appropriate. At this stage, depending on state rules concerning classification of students as disabled, intellectual assessment may be part of the multifactored assessment. Intellectual assessment should not dominate the assessment process; rather, it should be one component of a comprehensive evaluation that is tailored to the referral problem and oriented to determining specific intervention need(s). Consideration of other aspects or dimensions of behavior should receive equal or more attention and decision making about eligibility and placement should reflect a clear balance between intellectual assessment and other important information.

The choice of intellectual assessment measure(s) must be based on the characteristics of the student. Student characteristics such as age, sensory status, language competencies, and acculturation are crucial factors that must be considered carefully when professionals select specific intellectual measures. For some students, few if any good choices exist due to various combinations of language differences, sensory impairments, and acculturation. In some of these cases, intellectual assessment should be avoided. In other cases, interpretations should be extremely cautious and decisions considered highly tentative.

The best measures available should be used when intellectual assessment results are part of significant decisions such as disability classification. Practitioners should base instrument choices on published critical reviews in authoritative sources such as the Buros Mental Measurement Yearbooks (also see Salvia & Ysseldyke, 2001) as well as their thorough study of the available technical information. Instruments that are short forms of more comprehensive measures, tests with a single item type, and measures with dubious technical adequacy should be avoided.

Additional challenges arise when the effects of various disabilities such as sensory impairments or complex conditions such as autism or traumatic brain injury have to be considered in instrument choice and interpretation. Familiarity with a variety of instruments and knowledge of various disabling conditions are essential to the choice of measures and the interpretation of results in these complex cases.

DECISION MAKING

Information on intellectual functioning is used most often in decisions about classification of students as MR, LD, or gifted and talented. Most students considered for these classifications will be performing near the margins of the classification criteria; that is, they will perform at levels where they are just eligible or just ineligible for classification. For example, an IQ of less than 70 or 75 is used frequently as part of the criteria for a diagnosis of MR. The majority of the persons for whom an MR diagnostic decision is necessary will perform within a few points of the cut off score of 70 or 75. There are, for example, more students with IQs between 70 and 75 than have IQs below 70! Of course the same holds true for IQs of >130 and 125–130. A substantial proportion of cases will be within one standard error of measurement of the cutoff established by the state rules.

The mechanical application of scores to classification criteria is inappropriate in MR, LD, and gifted-talented eligibility decisions. Complex judgments are required rather than mechanical application of scores. These complex judgments should reflect application of the convergent validity principle described by Gresham (1985); that is, the consistency of information over settings, sources, and data collection methods. Application of the convergent validity principle provides a means to integrate information from the multifactored assessment. For students performing near cut-off points, a pattern of information consistent with the underlying diagnostic construct should lead to classifying the child as disabled. On the other hand, one or more sources of information that are not consistent with the diagnostic construct should lead to consideration of alternatives to classifying the student as disabled.

Inappropriate or Questionable Uses of Intellectual Assessment

An array of inappropriate or questionable uses of measures of general intellectual functioning will be described briefly in this section. An obvious inappropriate use is to reach conclusions about the individual using only the results from a measure of intellectual functioning, without considering a wide variety of other information. We are aware of no information on how frequently this inappropriate practice occurs, but it was of sufficient concern to merit a special sentence in federal regulations pertaining to assessment of students [IDEA, 34 CFR 300.532(b)]. We suspect that the results of an intellectual measure overshadow other important data quite frequently, and the other data often are more useful in developing interventions.

PROFILE ANALYSIS

One of the most frequent inappropriate uses is to conduct a profile analysis for the purpose of differential diagnosis (e.g., determining whether or not the student is learning disabled or emotionally disturbed). As noted previously, a considerable degree of subtest score variation is typical. Differences between scales or subtests, because they occur frequently, simply cannot be a unique feature of any diagnostic category, nor the basis for distinguishing between diagnostic categories.

GROUP DIFFERENCES

Applications of the results from studies of groups of students also need to be interpreted cautiously with individuals. For example, the WISC-R ACID profile has been reported frequently in contrasts of learning disabled and normal achieving students (2001). However, these findings are based on mean differences, developed from distributions of scores for normal achieving and LD groups. The overall distributions overlap considerably. Therefore, a specific normal achieving child may obtain the ACID profile and a specific student accurately characterized as learning disabled may not obtain that profile. Therefore, conformance or nonconformance with the particular profile reported for groups is not an accurate indicator of the appropriate diagnosis for an individual child.

PERSONALITY OR NEUROPSYCHOLOGICAL STATUS

Profile analyses for the purpose of determination of neurological strengths or weaknesses or psychodynamic personality characteristics are also fraught with significant errors of logic and probable unreliability. These interpretations have a long history in applied areas of psychology including school and clinical. The empirical basis for the interpretations typically is weak or nonexistent. In virtually all instances, careful studies have not been done with individuals known to possess the underlying neurological or psychodynamic characteristic inferred from the test profile. Rather, analogical reasoning of the form, *What would this most likely mean*, has been applied to analysis of the profile resulting in largely unsubstantiated inferences about the meaning of various subtests or scale discrepancies. These interpretations in the absence of empirical support are likely to be inaccurate, unreliable, and, in any case, not related to effective intervention methodology or techniques (Kavale & Forness, 1999; Reschly & Gresham, 1989).

STRUCTURED OBSERVATIONS

One of the most frequent justifications for administering an IQ test to nearly all students with learning and/or behavioral problems is the opportunity provided for structured observations. The problem with this use is that the observations occur in an unnatural setting, on a one-to-one basis, with an adult who may have little continuing involvement with the child, using tasks that do not reflect directly the difficulties that prompted the referral. Most important, the behavioral observations in the testing setting do not predict accurately behavior in other settings (Oakland, Broom, & Glutting, 2000; Glutting, Oakland, & McDermott, 1989).

In contrast, structured observations in natural settings are enormously useful *if* gathered through use of direct measures of the behavior of concern and related to crucial environmental or instructional variables that can be used in interventions. The question is, in large part, whether we adapt to the client's setting or whether we require the client to adapt to our setting. Use of the IQ test for structured observations is also time consuming, usually requiring 3–4 hours for test administration, scoring, interpretation, and report preparation. Time is precious, our time as well as the time of students. Time devoted to IQ testing inevitably reduces or eliminates the opportunity to conduct other assessment activities.

INFERENCES ABOUT GROUP DIFFERENCES

The final inappropriate use relates to the use of results on measures of general intellectual functioning to support inferences about innate abilities of individuals or groups. Although these questions are investigated, sometime rigorously and sometimes not, the varied and controversial inferences from this research have little relationship to our day-to-day practice with diverse groups of students. The most popular conclusions from this research have varied during our careers and will likely continue to be modified as new information is generated and more sophisticated investigative techniques are developed and applied. Our concern with accurate interpretation for individuals must include efforts to protect individuals from unwarranted inferences about innate abilities that may further diminish efforts to remediate problems and to intervene effectively.

Surgeon General's Warning

A kind of "surgeon general's" warning can be formulated to protect children and youth from unwarranted inferences about their intellectual abilities and to remind all of us, especially consumers of our work, of the developmental nature of measured abilities (Reschly, 1979). This "surgeon general's" warning is far from perfect. Concerned practitioners can develop appropriate modifications. However, the essential ideas are to protect students from inappropriate inferences such as the beliefs that (a) intellectual abilities are determined by genetic factors, (b) intellectual abilities are unitary, (c) IQ scores reflect all of intelligent behavior, and (d) performance on intellectual measures is fixed, or unchanging. We recommend the use of a statement such as the following in test reports and as attachments to test protocols.

> IQ tests measure only a portion of the competencies involved with human intelligence. The IQ results are best seen as estimates of likely performance in school and reflections of the degree to which children have mastered the middle class cultural symbols and broad culturally rooted facts, concepts, and problem solving strategies. This information is useful but limited. IQ tests do not reflect innate genetic capacity and the scores are not fixed. Some persons do exhibit significant increases or decreases in their measured intellectual abilities. (Reschly, 1979, p. 224).

BEST PRACTICES

Best practices considerations require careful judgments about (a) *when* and *how* intellectual assessment instruments are used; (b) the selection, administration, and interpretation of measures; and (c) prevention of misuses and misconceptions.

1. Appropriate use requires a context that emphasizes prevention and early intervention rather than eligibility determination as the initial phase in services to students with learning and behavior problems. The context within which the intellectual assessment occurs is crucial. The typical context is the investigation of the causes and correlates of learning problems. Special education eligibility may be a concern, but that concern should be investigated after, not before, the development, implementation, and evaluation of interventions within regular education settings.

2. Intellectual assessment should be used when the results are directly relevant to well-defined referral questions, and other available information does not address those questions. Evaluations should be goal directed. The goal of the evaluation should be to address significant questions developed jointly

between the psychologist and the referral agent. Some referral questions require consideration of current intellectual functioning, many others do not.

3. Mandatory use of intellectual measures for all referrals, multifactored evaluations or reevaluations is not consistent with best practices. It is not uncommon for all referred students to receive IQ tests, regardless of referral questions or behavioral problems. IQ test results simply are not relevant to many referral questions or reevaluation issues. A critical question is, *How would the intervention, classification decision, or selection of placement option change if an IQ test is or is not administered?*

4. Intellectual assessment must be part of a multifactored approach, individualized to a child's characteristics and the referral problems. The practice of using a standard battery, often dominated by IQ tests, for all children regardless of referral questions must be avoided. Standard batteries provide superficial information over very limited areas of functioning. In most instances, the standard battery does not relate directly to referral problems and is not well matched to characteristics of the child.

5. Intellectual assessment procedures must be carefully matched to characteristics of children and youth. A variety of instruments are available. No instrument is appropriate for all students. Special consideration needs to be devoted to choices of instruments with students exhibiting sensory or motor handicaps, language differences or significant cultural differences. Basal and ceiling problems need to be considered. For example, an instrument may not assess a low functioning youngster close to the bottom age of the test norms adequately because very few items will be administered due to ceiling rules and insufficient numbers of items for low-scoring persons.

6. Score reporting and interpretation must reflect the known limitations of tests, including technical adequacy, measurement error, and general performance ranges. Test scores should always be presented as ranges around an obtained score using confidence intervals. Furthermore, limitations in the norms for the test, in reliability or stability of scores, and questionable or undemonstrated validity, must be carefully considered and communicated to consumers of test information. Finally, the overall performance needs to be interpreted within broad categories, established by the test developer or established by other sources (e.g., state special education rules).

7. Interpretation of performance and decisions concerning classification must reflect consideration of overall strengths and weaknesses in intellectual performance, performance on other relevant dimensions of behavior, age, family characteristics, and sociocultural background. Present behavior is described. Interpretations and descriptions of likely future performance are inferred from the sample of current behavior. The sample of current behavior may need to be regarded with varying degrees of tentativeness depending on age, family characteristics, and sociocultural background. Furthermore, overall pattern of strengths and weaknesses in intellectual performance as well as the individual's performance on other relevant dimensions such as adaptive behavior and social skills must be incorporated in interpretations and recommendations.

8. The newest revision and most recent norms for a test should be used because recent studies show that the stringency of norms changes over time and more recent norms typically are tougher than older norms. The now well-known Flynn Effect must be considered to avoid the undue effects of out-of-date norms (Flynn, 1998).

9. Professionals should adopt strategies to prevent misuse and misconceptions about the results of intellectual measures. Many consumers of test results including teachers and parents often view the findings as reflecting a predetermined characteristic and regard the results as fixed. Many do not see the distinction between the results of measures of intellectual measures and the much broader construct of intelligent behavior. A "Surgeon General's Warning" should appear on test protocols and reports as a means to reduce the likelihood of misuse and misconceptions (see previous section).

SUMMARY

Intellectual assessment continues to be prominent in the services of school psychologists. That prominence depends in profound ways on the conceptual definitions and classification criteria for disabilities in educational settings. Changes that are underway regarding disability conceptions and criteria may change markedly the prominence of intellectual assessment in special education and school psychology. These changes are likely to be uneven across the United States. Where intellectual assessment continues, it must be carried out competently, implementing the best practices formulated in this chapter.

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Best Practices in Intellectual Assessment: Future Directions

Dawn P. Flanagan and Samuel O. Ortiz
St. John's University

OVERVIEW

The first chapter of the previous edition of this volume recognized the emergence of a "paradigm shift" in school psychology service delivery toward a foundation based on a problem-solving approach (Reschly & Ysseldyke, 1995). This new and promising focus, however, seems to have found no more stubborn ground from which to spring to life than that involving intellectual assessment and the use of standardized tests (Reschly & Grimes, 1995). Although advances in theory and research are sometimes given their proper, albeit brief, consideration, nothing seems to stir the passion of a school psychologist more than the publication of a new test. The brightly colored images with more realistic depictions of people and things, the more durable, precise, and carefully engineered blocks, the utilitarian aspects of the folding manual, the precision sheen of the protocol, and, of course, the crisp smell of those current norms, are enough to send the pulse of the average school psychologist racing into orbit. Tests, it seems, have become an indelible part of the character of school psychologists and a nearly indispensable tool within their intellectual assessment repertoire. To be sure, any discussion involving "best practices" in intellectual assessment would appear incomplete if it did not focus heavily on issues of standardized tests and testing. Yet, virtual neglect of the underlying and fundamental theoretical notions regarding intelligence and cognitive abilities in the same discussion would not likely result in much of a protest from the field. Despite the fact that it is the very guiding force behind both *measurement and interpretation*, theory has seldom been something to which school psychologists have paid much attention (McGrew & Flanagan, 1998). Perhaps the paradigm shift that needs to occur in school psychology with respect to intellectual assessment is not necessarily that we adopt any *particular* paradigm, but rather that we actually use one.

Can we really say that current school psychology practice, in particular the use of standardized tests, is guided by modern, empirically supported theory? Can it be said that all school psychologists are trained and educated in issues of modern theoretical formulations of intelligence and cognitive abilities and their relevance to measurement and interpretation? The truth may be painful, but the answers are evident—many practitioners are driven primarily by the inertial heritage of test kits, the pretty packages they are wrapped in, and their familiarity with them, and not by the science or technology that underlie them or that should underlie them.

Not surprisingly, the criticisms surrounding standardized intelligence tests and their use have been far ranging and form a substantial body of literature. The spectrum tends to be polarized with many advocates in staunch defense of tests and their benefits on one end and those who see no merit in continuing to use them on the other. Most of us are probably somewhere in between, and the controversy seems to ensure only one thing—that tests are unlikely to disappear from the repertoire of the applied school psychologist anytime soon. But notions regarding best practices have, in the past, tended to be based on finding and applying solutions and remedies to the problems inherent in popular intelligence tests identified by researchers and scholars in the field (Kamphaus, Petoskey, & Morgan, 1997).

For example, it was found that individual subtest score interpretation is invalid, so one solution was to interpret composites only (see Flanagan, Andrews, & Genshaft, 1997, for a review). However, composites tend to wash out meaningful differences in the specific abilities that comprise them, so we were advised to evaluate clinical profiles (e.g., Verbal IQ – Performance IQ differences on the Wechsler Scales) (Sattler, 1992, 2001). Then we learned that clinical profile analysis is too subjective and unreliable, so it was recommended that we interpret profiles using stringent statistical methods and procedures (e.g., Kaufman, 1979, 1994; Kaufman & Lichtenberger, 1999). The identification of these problems and their solutions could very well continue ad nauseum. However, such "remedies" appear to do little with respect to advancing intellectual practice in any meaningful way. The reason is that the litany of recommendations concerning what to do or what not to do with standardized tests may well be important and proper, but it does not begin to address the most basic and severe maladies that have plagued the practice of assessing intellectual abilities since the inception of IQ measures to our field. Promoting best practices in intellectual assessment through piecemeal methods is like making incremental navigational changes to a vessel that has already gone astray so that it will arrive more precisely at an unknown destination. As applied psychologists making high stakes decisions, it is imperative that we know exactly where we are going (viz., in terms of measurement and interpretation) when we select and use standardized tests. The only map that seems likely to guide us in a meaningful direction is theory.

Intelligence Theory in Perspective

The assessment practices adopted by the field of school psychology have roots dating back a century or more (Fagan & Wise, 2000). From both an historical and contemporary perspective, there has perhaps been no greater influence on the practice of assessment than the psychometric tradition (Neisser et al., 1996). The very process of analyzing, classifying, and assigning meaning to the variety of human cognitive abilities, in particular, "has intrigued scientists for centuries" (Kamphaus et al., 1997, p. 33). At the core of this tradition rests the development and refinement of the ubiquitous intelligence test, which has become nearly synonymous with the profession. This association has not, however, been universally affirmed by the passage of time. But more and more, school psychologists are beginning to understand what Sarason meant when he asserted that "school psychology was born in the prison of the IQ test" (1975; as cited in Reschly & Grimes, 1995).

It is widely known that Binet's original scales were created for the purpose of identifying a section of the general school population who were performing much lower than average and who might, therefore, benefit most from specialized instruction. His intent was not to measure intelligence but rather to identify individuals whose academic performance fell significantly below that of the majority of their peers and provide them with remedial instruction (Gould, 1996). H. H. Goddard brought Binet's scales to the United States and extended their application from finding those in need of help to include finding those who were not able or "feeble-minded." Goddard essentially sanctioned the IQ as a measure of nothing less than intelligence itself as a single, innate entity. He also championed the idea that his adaptation of the Binet Scales could identify, reliably, individuals who should be segregated from society because of their inability to contribute meaningfully to the common welfare—a notion that continues to drive educational decision making to the present day (Zenderland, 1998).

L. M. Terman revised Binet's Scales in 1916 to form the Stanford-Binet, which quickly set the standard against which all subsequent IQ tests were measured. Terman succeeded in popularizing the notion that intelligence could be measured reliably, and thus, individuals could be classified according to their ability for a wide variety of socio-psychological purposes (e.g., employment aptitude, predicted scholastic achievement, college admissions). In 1917, R. M. Yerkes developed the Army Alpha and Beta Tests (in collaboration with Goddard, Terman, and others) that were used to place individuals in military positions for which they were "best suited." Yerkes demonstrated the fact that mass mental testing could be accomplished, and with it a whole new vista for ability testing was born. Shortly after the end of World War I, the relative success of Yerkes' mass testing efforts resulted in the emergence of commercial and educational interest in IQ testing. This is perhaps exemplified best by the advent of the Educational Testing Service (ETS) founded by C. C. Brigham, an assistant to Yerkes who helped to administer the Army tests. It did not take long for mental testing to become a multimillion-dollar industry. The evolution of ETS, and many other companies involved in the development and publication of IQ tests, attests to their economic value (Lemann, 1995).

Although monetary gain may not have been the driving force behind the development of IQ tests, it certainly was not a trivial issue. Furthermore, much of the intent behind the science involved in test development was subject to the deeply rooted cultural values and beliefs that prevailed in society during the early twentieth century, including the notion that non-whites were innately less intelligent than whites and that females were innately less intelligent than males (Gould, 1996). On both a conscious and unconscious level, intelligence tests were developed and constructed with these (and other) ideas in mind that unfortunately took precedence over the more substantive issues of scientific theory. Fueled by a socio-political climate, ripe for the very notions espoused by test developers and mesmerized by intoxicating possibilities regarding mass mental ability testing, an industry was born with such passion and inertia that it continues to plow under any of those who oppose it. Indeed, the roots of intelligence testing had every bit as much to do with economics and opportunism as they did science and psychology (Lemann, 1995). For too long now, the latter have been sacrificed in favor of the former. If we as a profession are to emerge from the prison of the IQ test, it will be theory that provides the key to unlocking the cell door.

BASIC CONSIDERATIONS

Theory Comes First

Perhaps the single most critical problem with intelligence tests and their use is that historically they have been based on either decades old theory or no theory at all. Failure to put theory first is unacceptable because such practice runs counter to all notions of good science and the scientific method. Strict adherence to the basic tenets of good science simply cannot yield to issues of expediency or convenience. A prime example of this problem can be seen in the history of the Wechsler scales. In 1939, David Wechsler developed the Wechsler-Bellvue (W-B) (see Flanagan, McGrew, & Ortiz (2000) for a brief history of the development of the Wechsler scales). Among his more notable contributions as a result of that effort were the deviation IQ, measurement of intelligence through both verbal and nonverbal means, and developmental scaling of items within each subtest rather than across subtests. Wechsler's intentions in creating the W-B were driven less by a need for precision in measurement of cognitive ability constructs than by practical reasons related to his clinical practice (Kaufman, 1990; Zachary, 1990). Wechsler was more interested in being able to distinguish clinically between an acutely psychotic individual out of touch with reality and someone who was simply incompetent to understand the nature of their behavior. But Wechsler fell prey to the very same problem that befell many of his predecessors—he did not concern himself much with theory (Flanagan et al., 2000; Kamphaus et al., 1997).

In 1904, Spearman had already published on the nature of general intelligence, or g, measured through factor analytic techniques, which he more or less invented. The g factor quickly gained wide acceptance as the predominant theory of intelligence. When Goddard turned the Binet Scales into an intelligence measure, IQ was thought to be a measure of this *g* construct (Gould, 1996; Lemann, 1995). The Stanford-Binet held much to the same basic theoretical conceptualization and naturally, so did Wechsler's W-B. For the most part, as reflected in the structure of his tests, Wechsler never really attempted to develop or advance any particular theoretical viewpoint beyond that of *g*. Because the W-B, and its subsequent iterations, such as the WAIS (1955), WISC (1949), and WPPSI (1967), were oriented toward the needs of practitioners, its user friendly nature gave it tremendous clinical appeal and eventually allowed it to surpass the venerable Stanford-Binet as the preeminent IQ test in the United States. From the very beginning, from the Army Mental Tests to the Stanford-Binet to the W-B and beyond, theory has been a rather minor concern in test development. For whatever reasons, some of which have already been discussed, the problems created by the failure to adhere to modern theory have been and remain largely ignored.

The problems inherent in the lack of a specific theoretical framework to guide assessment are seen in the "Verbal-Performance" dichotomy that continues to underlie the Wechsler Scales. The historical dominance of the Wechsler Scales and the central position granted to them in training programs has resulted in a wide ranging cadre of assessment professionals who have internalized the belief that a verbal/nonverbal dichotomy is one of the best models for understanding cognitive test performance. Yet, the Wechsler verbal/nonverbal model is not based on any empirically derived theory of intelligence and from the perspective of contemporary psychometric theory, this model operationalizes only a small portion of the multiple, empirically supported, broad cognitive abilities known to exist. For example, Carroll (1993a, 1993b) concluded that the Wechsler Verbal scale is an approximate measure of crystallized intelligence (*Gc*), and the Performance scale is an approximate measure of both broad visual perception (*Gv*) and, somewhat less validly, fluid intelligence (*Gf*). In support of Carroll's conclusion, recent research has shown that the Wechsler Performance scale is predominately a measure of *Gv*, and not *Gf* (Elliott, 1994; Kaufman & Kaufman, 1993; McGrew & Flanagan, 1998; Woodcock, 1990). Carroll (1993a) provided a succinct judgment regarding the atheoretical Wechsler Scales when he concluded, "presently available knowledge and technology would permit the development of tests and scales that would be much more adequate for their purpose than the Wechsler Scales" (p. 702).

Not all test developers, however, have treated the issue of theory casually. While some test developers continue to pay little attention to theory, Richard Woodcock took a courageous step in modernizing test technology. For example, the Woodcock-Johnson—Revised: Tests of Cognitive Ability (WJ-R; Woodcock & Johnson, 1989) emerged as perhaps the first test ever to be designed expressly to operationalize current, empirically supportable theory. Built around Horn's extension of Cattell's original *Gf-Gc* theory, Woodcock clearly placed theory at the center of the development and construction of the WJ-R. In other words, he fit a battery of tests to the theory, not theory to the battery. It is interesting to note that although the Cattell-Horn *Gf-Gc* theory has been used loosely as the theoretical basis for a number of tests (e.g., Kaufman Assessment Battery for Children [K-ABC], 1983; Kaufman Adolescent and Adult Intelligence Test [KAIT], 1993; Stanford-Binet: 4th edition [SB:IV], 1986), the *Gf-Gc* conceptions underlying these instruments tend to refer to Cattell's two-factor, fluid and crystallized intelligence dichotomy that is now upward of 50 years old. Modern *Gf-Gc* theory encompasses multiple cognitive abilities and is now known as the Cattell-Horn-Carroll theory, or CHC theory.

Another theoretical model, an information processing one, has also been used recently in test development. Specifically, the PASS model (planning, attention, simultaneous, sequential) forms the basis for the Cognitive Assessment System (CAS; Das & Naglieri, 1997). Although current research has demonstrated that the PASS model is not the best explanation of the factorial structure underlying the CAS (Keith, Kranzler, & Flanagan, 2001; Kranzler & Keith, 1999; Kranzler, Keith, & Flanagan, 2000), the authors' placement of theory as both the central and comprehensive element in the design of their test is noteworthy. Although the trend toward making theory central in test development is admittedly slight, it is nonetheless quite perceptible. The Woodcock-Johnson (3rd edition) (WJ III; Woodcock, McGrew, & Mather, 2001) exemplifies the success attainable by test developers in efforts to incorporate theory from the earliest to the latest stages of test development and at every point in between. We can only hope that this trend will continue to strengthen in the future.

Theory Guides Instruction

Despite the meager theoretical beginnings of IQ tests, very little has stood in the way of IQ (and, indeed, the Wechsler-based IQ) in its unrelenting ascension to a position of unparalleled power and supremacy in intellectual testing, intellectual assessment courses, and decision making. IQ has taken on a life of its own, credited with properties unheard of in any theoretical formulation, and has remained largely unquestioned by applied practitioners and those who train them. Lezak (1995) noted:

> [It] has been suggested that examiners retain IQ scores in their reports to conform to the current requirements of...various other administrative agencies...this is not merely a

> case of the tail wagging the dog but an example of how outdated practices may be perpetuated even when their invalidity and potential harmfulness has been demonstrated. Clinicians have a responsibility not only to maintain the highest—and most current—practice standards, but to communicate these to the consumer agencies. If every clinician who understands the problems inherent in labeling people with IQ scores ceased using them, then agencies would soon cease asking for them (p. 691).

It is easy enough to blame the test development industry for their decision to relegate theory to secondary status (e.g., Flanagan et al., 2000), and it is equally easy to blame applied psychologists for failing to realize this serious error and take appropriate action. However, training programs must shoulder much of the blame for perpetuating the practice of psychological assessment in the absence of modern theory and research. As creatures of habit, subject to inertia and innately disdainful of change, it is a natural tendency to adhere closely to the methods and procedures first taught to us. If school psychology training programs are to effect any real paradigmatic change in the practice of intellectual assessment, then recognition of the central role of theory in measurement and interpretation will have to supersede the lock-step, test-kit–focused instruction that is all too common and which perpetuates antiquated, unsupportable, and largely inappropriate assessment practices. If school psychology training programs ceased the teaching of atheoretical methods of assessment and interpretation, then practitioners would soon cease the practice. It has been and continues to be the case that practicing school psychologists spend more time in assessment-related activities than any other activity. Yet training programs have a single course on intellectual assessment that focuses mainly on administration and scoring of the Wechsler Scales (Alfonso, Oakland, La Rocca, & Spanakos, 2000). Is it any wonder that school psychologists and their Full Scale IQ are losing (or have lost) credibility in a number of assessment related arenas (e.g., evaluation of learning disability; see Kavale & Forness, 2000; Siegel, 1999; Stanovich, 1999). When theory plays no role in instruction, practice remains invalid.

Theory Drives Interpretation

Kamphaus et al. (1997) described the history of intelligence test interpretation as being composed of four waves: (a) quantification of a general level, (b) clinical profile analysis, (c) psychometric profile analysis, and (d) applying theory to intelligence test interpretation. The first wave was driven by the basic intentions of the IQ test founders—the classification of individuals into separate groups according to general ability. Because intelligence was being measured via IQ, it was easy enough to establish descriptive ranges of functioning for various types of groups. Early labels for those believed to have inferior abilities included "moron" and "feeble-minded" (Goddard's terms) whereas those at the opposite end of the spectrum were greeted with cries of "genius" and "superior." Even Wechsler (1944) argued that labels should correspond to medical and legal terminology and thus included such terms as "idiot" and "imbecile" in his descriptive schemata. With some refinements, primarily with respect to the pejorative connotations of many of the terms, modern IQ tests retain this type of descriptive and labeling classification system.

Theory played a role in the initial development of classification schemata only to the extent that it was believed that a single, innate quality (i.e., general intelligence) could be measured in all people, and thus grouping individuals was a simple exercise in statistics. The second wave of interpretation, however, made no pretenses to be connected with theory at all. Kamphaus et al. (1997) describe the second wave as clinical profile analysis. It was, perhaps, the popularity of the W-B scales that drove much of this form of interpretation primarily because the organization of the test lent itself readily to partitioning, albeit in ways Wechsler never originally intended. In combination with the second order IQs (VIQ and PIQ), the Wechsler scaled subtest scores seemed to offer the promise of understanding intellectual functioning beyond the simple measurement of general ability. Thus was born the idea of the "profile" based on the assumption that "patterns of high and low subtest scores could presumably reveal diagnostic and psychotherapeutic considerations" (Kamphaus et al., 1997, p. 36). Research by Rapaport, Gill, and Schafer (1945–1946) is largely credited with bringing this practice to practitioners. The intuitive clinical appeal of profile analysis may have seemed, on the surface, to represent a more sophisticated approach to intelligence test interpretation as compared to quantification of general functioning, but it was a flawed approach. The flaws rested in the fact that profile analysis made it easy to fit the obtained profile with the known functional patterns of any individual and did little to inform intervention. Despite these problems, and without theory to guide the process, this form of interpretation remains the dominant interpretive method to date (Kamphaus et al., 1997; Keith, 2000).

The advent of microcomputers and inexpensive statistical software helped to give rise to the third wave of interpretation, known as psychometric profile analysis (Kamphaus et al., 1997). Like the second wave, theory plays virtually no role in helping practitioners make sense of their data. Rather, techniques such as factor analysis, albeit a rigorous scientific method, were applied to an already misdirected interpretive practice. For example, Cohen (1959), among others, showed that interpretation of subtests as reliable measures of a presumed construct was not empirically supportable (nor theoretically, for that matter). In 1974, Bannatyne applied psychometric techniques to reorganize a complete WISC profile in an attempt to improve diagnostic interpretation. Although it did improve reliability somewhat, the problems with validity remained. Kaufman (1979, 1994) tried desperately to dispel the notion that simple application of psychometrics to profile analysis constituted a valid interpretive framework. He combined psychometric approaches with basic notions of measurement theory and common sense techniques (e.g., logical decision making, top-down procedures, supplemental testing as necessary, and so forth) in order to emphasize flexibility in interpretation and bring meaning to an individual's scaled score profile. More recently, it has become increasingly clear that profile analysis, with or without the application of psychometric theory, is largely without empirical support and therefore should be abandoned. In the words of the researchers who brought the fallibility of the third wave of test interpretation to the forefront, "until preponderant and convincing evidence shows otherwise, we are compelled to advise that psychologists just say 'no' to subtest analysis" (McDermott, Fantuzzo, & Glutting, 1990, p. 299).

In order to understand an individual's functioning across multiple, specific cognitive abilities, vis-à-vis current theory and research, it is necessary to adopt measurement and interpretation approaches that are psychometrically defensible—approaches other than subtest or profile analysis. Kamphaus et al. (1997) believe that interpretation must emanate from theory if it is to become a reliable and valid practice. These authors see the next and fourth wave of IQ test interpretation as mainly comprising the need to integrate research and theory. Even during the third wave of interpretation, Kaufman (1979) had noted that interpretive problems with intelligence tests might be traced back to a lack of a specific theoretical base. Kaufman extended this argument further, suggesting that perhaps interpretation could be enhanced if subtests were reorganized not just through exploratory factor analysis methods but into constructs specified by a particular theory. What is key in Kaufman's ideas and those proposed by Kamphaus et al. (1997) with respect to the next wave of interpretation, is that theory must play a central role in guiding the interpretive process and that the need to adhere to this requirement may well necessitate conforming assessment instruments to theory. This premise formed the foundation of the "CHC Cross-Battery" approach, which places theory at the heart of the assessment and interpretation process (Flanagan et al., 2000; Flanagan & Ortiz, 2001; Flanagan, Ortiz, Alfonso, & Mascolo, 2002; McGrew, 1997; McGrew & Flanagan, 1998). Indeed, success in advancing current intellectual assessment practice to a level commensurate with current knowledge and research is likely to emerge only from the application of modern theory. By framing interpretation within the context of theory and by extending Kaufman's notions regarding "intelligent testing," the fourth wave of interpretation may well be best described as "intelligent interpretation" (Flanagan et al., 2000). When theory plays no role in interpretation, conclusions are ambiguous.

Lack of Theory Precludes Validity

Despite Wechsler's dramatic improvement in many ways over the Stanford-Binet, it is unlikely he would have gotten far with the W-B and its subsequent descendants (WAIS, WISC, WPPSI, etc.) had he not validated it through correlation with the Stanford-Binet. After all, Terman had already decreed that the Stanford-Binet was a valid measure of intelligence (quantity and quality of empirical evidence notwithstanding). As such, it was reasoned that any measure that correlated with it must also measure intelligence. Thus, the lineage that established a large portion of the validity for virtually all IQ tests that came afterward essentially began with the Stanford-Binet and the W-B. In almost every case, validity of a new IQ test was and still is established through positive correlation with one or both of these hallmark tests and virtually no attempt is made to provide any independent confirmation for the proposition that the test actually does measure intelligence. One only needs to consider the unfair criticism endured by the WJ-R for having only moderate correlations with the Wechsler as evidence of the influence and power of this heritage. Even when the lack of validity for IQ tests is pointed out, it does little to sway the minds of publishers and users alike. With respect to the WAIS-R, Salvia and Ysseldyke (1995) express it rather succinctly, "no evidence for the validity of the WAIS-R is included in the manual. Instead, the authors argue that (1) the WAIS-R and WAIS overlap considerably in content, (2) there are many studies of the validity of the WAIS, and (3) the WAIS-R will no doubt correlate with other measures of global intelligence as well as the WAIS did" (p. 182–183). We imagine that "other measures of global intelligence," in this context, is no doubt the marketing euphemism for the Stanford-Binet. Nevertheless, the same argument can be applied to the relationship between the WISC-R and the WISC-III where most of the information presented in the WISC-III manual in support of its validity consists of information on the validity of the WISC-R .

Historically, IQ tests have paid only marginal lip service to issues of validity. Apart from the positive intercorrelations among a collection of cognitively based tasks, there appears to be little if any other support for the notion that we are indeed measuring intelligence. The very concept of *g* remains the best example of this issue. On one side, Jensen (1998) argues that *g* is a "ubiquitous superfactor...appropriately called *general mental ability*" (p. 115; italics in original) for which he claims there is a great deal of empirical evidence, although he stated that it is primarily, if not exclusively manifested by "positive intercorrelations among diverse measures of cognitive ability" (p. 115). On the other side, Horn argues that "there is no contrary evidence, no evidence supportive of *g*. The only thing that gets treated as evidence is positive manifold of the intercorrelations among measures of cognitive abilities and a string of correlations with other variables that reflect this positive manifold. But this is evidence that Thurstone showed many years ago does not support a structural hypothesis of *g*, much less a developmental, genetic, neurological, educational, social, anthropological—in general, a construct validity—hypothesis" (CHC listserv, August 1999).

The controversy regarding the existence of a general intelligence construct is only one aspect of concern about the validity of IQ tests. Perhaps a more significant problem has been the failure of test developers to provide validity evidence related to the subordinate constructs. One of the most striking illustrations of this practice can be seen in the Freedom From Distractibility (FFD) factor found on the WISC-III (and originally called the "third factor" on the WISC-R). In short, FFD is an artifact of the factor analysis of a severely limited battery of tests and should not be considered a basic primary factor in mental organization (Carroll, 1993a). As such, the external validity evidence for the FFD index is, not surprisingly, very limited, extremely confusing, and contributes little in the way of explanation or prescription. The replacement of the FFD label with *working memory* in the recent third edition of the WAIS is a welcomed step in the direction toward linking test indicators (i.e., subtests) to well-defined and validated cognitive constructs.

Even the more established Performance IQ (PIQ) factor is not without validity problems. It has become rather common to refer to PIQ as "nonverbal ability" when in fact there is no such thing as "nonverbal" abilities—only abilities that are expressed nonverbally (Kamphaus, 1993; Reynolds & Kamphaus, 1990). As mentioned previously, one of Wechsler's main contributions to IQ test development was the organization of a set of tests, some of which were meant to quantify intelligence through verbal means and some through less verbal means. Wechsler never regarded the Verbal-Performance dichotomy as representing two different types of intelligence. Rather, his intent was to organize the tests to reflect the two different ways (i.e., two different "languages" or channels) through which intelligence could be expressed (Kamphaus, 1993; Reynolds & Kamphaus, 1990; Zachary, 1990). Recent factor analyses, however, have shown that two traditional subtests comprising the PIQ domain (Picture Completion and Picture Arrangement) have significant correlations with tests that measure both visual-spatial skills and acquired knowledge suggesting that both visual processing and crystallized intelligence play a part in determining success on these tasks (Flanagan et al., 2000; McGrew & Flanagan, 1998). The PIQ domain is also confounded by speed of processing (i.e., the Coding subtest) and, most recently, has been confounded further by fluid reasoning (i.e., the Matrix Reasoning subtest on the WAIS-III). In addition, the characterization of PIQ as being "nonverbal" is also misleading because although the underlying subtests do not require any oral or expressive language ability, they do quite often demand a high level of receptive language skill from the examinee in order to comprehend the test's instructions and examiner's expectations. To say that PIQ is a good representation of nonverbal ability is to be ignorant of contemporary theory and of the facts regarding construct validity. When theory plays no role in test development, validity remains elusive.

Theory Guides Intervention

Implicit in the title of school psychologist is the notion of relevance to education and instruction. For what purpose do we justify the use of standardized tests of intelligence in the school setting if not for informing the development of effective remedial strategies? Even as early as 1922, Lippman (as cited in Gould, 1996) recognized the problems with mental testing when he wrote:

> The danger of the intelligence tests is that in a wholesale system of education, the less sophisticated or the more prejudiced will stop when they have classified and forget that their duty is to educate. They will grade the retarded child instead of fighting the causes of his backwardness (p. 209–210).

The Full Scale IQ (FSIQ) that is included in nearly every psychoeducational evaluation report ever written reveals little in the way of diagnostic meaningfulness and yields virtually no information relevant for the purpose of intervention planning. Given that a great majority of school psychologists' time is spent in assessment, particularly with respect to learning disabilities, the continued use of global scores only reinforces their lack of utility. According to Kaufman (1990), "the individual tested makes an unspoken plea to the examiner not to summarize his or her intelligence in a single, cold, number; the goal...should be to respond to that plea by identifying hypothesized strengths and weaknesses that extend well beyond the limited information provided by FSIQ, and that will conceivably lead to practical recommendations that help answer the referral questions" (p. 422). Kaufman's comments were echoed by Lezak (1995) who, when discussing the Wechsler FSIQ, stated that,

> average scores on a WISC battery provide just about as much information as do averaged scores on a school report card. There is no question about the performance of students with a four-point average: they can only have had an A in each subject. Nor is there any question about individual grades obtained by students with a zero grade point average. Excluding the extremes, however, it is impossible to predict specific disabilities and areas of cognitive competency or dysfunction from the averaged ability test scores (p. 691).

Solid links to intervention are unlikely to ever spring spontaneously from global scores generated with largely atheoretical tests. The limited relevance of FSIQ to the diagnosis of many conditions as well as to intervention has been highlighted by recent research that investigated the relations between *g* and specific cognitive abilities and general and specific reading achievement (e.g., Flanagan, 2000; McGrew, Flanagan, Keith, & Vanderwood, 1997; Keith, 1999). It was found that auditory processing (*Ga*) abilities (among others) were strongly related to reading above and beyond the explanation provided by *g*. Although the effect of *g* was larger than that for *Ga*, recent research has shown that intervention directed at specific *Ga* abilities (e.g., phonetic coding) improves reading performance (e.g., Felton & Pepper, 1995; McGuiness, McGuiness, and Donohue, 1995; Wagner, Torgesen, & Rashotte, 1994). Conversely, attempts to modify general intellectual ability have not resulted in long-standing changes (Gustafsson & Undheim, 1996), with the available research suggesting that specific abilities may be most amenable to modification (Carroll, 1993a). Thus, the probability of developing successful interventions lies not at the apex of the hierarchy of cognitive abilities (i.e., *g*) but at lower levels (see Flanagan et al., 2000; Flanagan et al., 2002; Kaufman, 1994).

In all fairness, IQ tests were developed precisely for the purpose of classification, not intervention or problem solving. Thus, it seems hardly fair to criticize them for doing exactly what they were originally intended to do. Recall, however, that Binet sought to identify individuals who might benefit from some form of special or remedial education, solely on the basis that they were performing quite poorly in the classroom compared to their age or grade level peers. Ability tests, at their earliest inception were indeed meant to have intervention links and designed to have practical use in solving real world (school and classroom) problems. But when Binet's scales were adapted as a tool for evaluating intelligence only, apart from any other concern, the hope of creating and maintaining a bridge to treatment or intervention planning was all but lost. Yet, the advent of school psychology as a modern profession in the early 1970s appears to have brought us back full circle to the very predicament Binet faced. Use of IQ tests in the school setting most often revolves around the need to identify and diagnose disability specifically for the purpose of providing special education services. Whereas today's federal and state legislative codes mandate the need to identify a disability as part of the condition for eligibility for services, Binet, of course, had no such legal constraints. However, because current regulations call for the generation of data that will assist in developing an appropriate instructional program for any individual who is identified as being disabled and otherwise qualified to receive special education services, it seems clear that the need to link testing with intervention has returned full force.

The key to linking assessment with treatment must therefore lie in recognition of the fact that intervention, not classification, is the main focus of evaluation. If assessment begins with the notion that what is being done is simply quantifying an ability, then that is all that will be done. Assessment should begin with deliberate efforts to gather relevant information for the purpose of developing appropriate and effective instructional strategies that will assist in educating the individual. This can happen readily when theory remains central to the process and when it is combined with empirical research in a systematic way that highlights the relationship between ability constructs and academic skills. An innovative example of the manner in which theory and research can be integrated in order to produce information that guides intervention is seen in the comprehensive framework for learning disability (LD) determination put forth by Flanagan et al. (2002). By taking the latest LD research and combining it with theory driven, cross-battery assessment methods within the context of a systematic diagnostic process, these authors have operationalized learning disability in a way that is likely to improve the reliability of the diagnosis and yield data that link the disability to specific underlying cognitive processing deficits. Knowledge of the root cause of a learning disability is part and parcel of the process of developing instructional methods to deal with it (see Das, Naglieri, & Kirby (1994) and Naglieri (1997) for additional examples of linking theory to intervention). Although the practice of IQ testing has never been much concerned with intervention, there is no reason why it cannot be a more salient component of the process of assessment. When theory plays no role in the assessment-intervention link, the development of appropriate and effective instructional strategies is difficult.

Theory is Transdisciplinary

For too long the IQ has been the sole province of the applied psychologist and has even been encoded into legal statutes to keep its derivation and assignment of meaning well within the scope of trained practitioners of psychology. We have come to believe that intelligence, and all constructs which relate to it, belong solely to the field of mental testing as if it were a pure and quantifiable entity. Never mind that cognition and language tend to be so interrelated that it is, for example, virtually impossible to distinguish between a severe language delay and mental retardation in a 5-year-old child. Never mind that one of the three core academic subjects, arithmetic, appears on both IQ and achievement tests. Never mind that common definitions of learning disability rely heavily on the concept of global ability and its hypothesized relationship to academic skills. Intelligence is not an isolated construct. It does not exist independent or irrespective of other constructs, such as language or academic achievement. If intellectual assessment is to remain a vanguard in the assessment repertoire of the applied school psychologist, then the arrogance of the IQ test mentality must be relinquished.

The idea that intellectual assessment rarely occurs in a territorial vacuum is evident in the concepts of ability and achievement. Despite the distinctions drawn between these concepts on a daily basis in the schools, surprisingly, there is no ability-achievement dichotomy recognized or supported in the cognitive psychology literature. The difference between ability and achievement appears to be primarily a verbal, not theoretical, one. For example, both Carroll (1993a) and Horn (1991) include reading and writing (*Grw*) and quantitative knowledge (*Gq*) ability constructs in their theoretical formulations of intelligence and the structure of cognitive abilities. These two abilities are routinely found on achievement tests and many commonly used intelligence tests either include measures of reading/writing (*Grw*) and math (*Gq*) or involve these "achievement-like" abilities. According to prominent theorists (e.g., Carroll, 1993a; Horn, 1988), the ability-achievement distinction is primarily semantic; that is, measures of cognitive abilities are every bit as much measures of achievement as measures of achievement are measures of cognitive abilities. Rather than being mutually exclusive, cognitive and academic abilities can be thought of as lying on a continuum with those abilities that are more dependent on and tend to develop largely as a function of formal education and direct learning and instruction at one end (e.g., *Grw*, *Gq*) and abilities that are less dependent on and tend to develop less as a function of formal education and direct learning and instruction at the other end (e.g., Processing Speed [*Gs*]). Thus, "abilities are achievements from past learning just as they are at the same time aptitudes for future learning. Most abilities develop from extensive experience across learning history. . . . And ability differences are influenced by genetic factors as well as by experience" (Snow, 1994, p. 4). Others have been more to the point in their views on the relation between IQ and achievement. According to Lemann (1995) in reference to an article that appeared in *The Scientific Monthly*:

> Without mentioning the SAT specifically, the article treated academic-aptitude and IQ tests as closely related—which in fact, they were and still are. IQ tests have always heavily stressed reading comprehension and vocabulary items like analogies and antonyms, and so does the verbal section for the SAT. Back in the early days Carl Brigham published a scale for converting intelligence test scores to SAT scores. Paul Diederich, a contemporary of Henry Chauncey's [first president of ETS] who was for decades a researcher at ETS, expresses a view common in the field: "IQ tests are reading comprehension and vocabulary doctored up to look like reasoning. To change the SAT to an IQ you'd simply divide the score by an age measure. Basically they're the same thing" (p. 86).

If something like vocabulary, for example, is a part of IQ tests, part of achievement tests, part of language tests, and part of classroom instruction, it would seem that communication regarding the concept and meaning of vocabulary among the various disciplines would be straightforward. Unfortunately, this is rarely the case. Although there are many ability constructs that overlap the various fields involved in studying one or another aspect of human cognitive functioning, each discipline has chosen to use and define the very same construct in very different ways, thereby complicating matters of communication. For example, vocabulary on the WISC-III for the school psychologist might be interpreted as a measure of lexical knowledge—a narrow ability subsumed by Crystallized Intelligence (*Gc*). For the speech language specialist, vocabulary from the Peabody Picture Vocabulary Test (Dunn, Dunn, & Williams, 1997) is seen as a measure of receptive language ability. And for the educational specialist, vocabulary from the Wide Range Achievement Test (Wilkinson, 1993) is viewed as a measure of reading ability. If there is to be any benefit in working collaboratively during the assessment and evaluation process, school psychologists will need to recognize the substantial degree of construct overlap that exists with other fields and vice versa. Moreover, if the various professionals involved in assessment can use and apply a theory that specifies the relationship between the various shared constructs, the process of measurement and interpretation will likely become significantly more complementary. The current CHC theoretical formulation represents one such viable choice because it provides not only a practical and empirically supported taxonomic model from which to understand and interpret human cognitive, academic, and language abilities but also provides a common set of names or terms for the components of the theory (i.e., a standard nomenclature) (see Carroll, 1997; Flanagan et al., 2000; Flanagan & Ortiz, 2001; Flanagan et al., 2002; Kaufman, 2000; McGrew & Flanagan, 1998). Because of the comprehensiveness of CHC theory, it is equally applicable to practitioners who study and assess cognitive, academic, and language abilities. Thus, adoption of the established CHC theoretical nomenclature would increase the precision in communication among practitioners and researchers and provide a useful foundation whereupon a nonproprietary and shared "knowledge base [could] be accumulated" (Reynolds & Lakir. 1987). When theory plays no role in communication among professionals across disciplines, assessment is territorial.

In summary, it has been noted that an unfortunate by-product of the Wechsler Scales' success is that it has served to constrain practice and in many respects limit growth and progress. The staying power of its antiquated taxonomy—in particular the verbal/performance dichotomy—is at variance with modern taxonomies that are more supported, comprehensive, and evolving. "The premature 'hardening of the taxonomy categories' can result in a deformation of the scientific process through the 'hermetically sealing of the boundaries of knowledge'" (Prentky, 1994, p. 507; cited in Flanagan et al., 2000). It also seals the boundaries between disciplines. Continued reliance on outdated, static and invalid taxonomies will no doubt eventually seal school psychology in the prison of our IQ tests.

BEST PRACTICES IN INTELLECTUAL ASSESSMENT

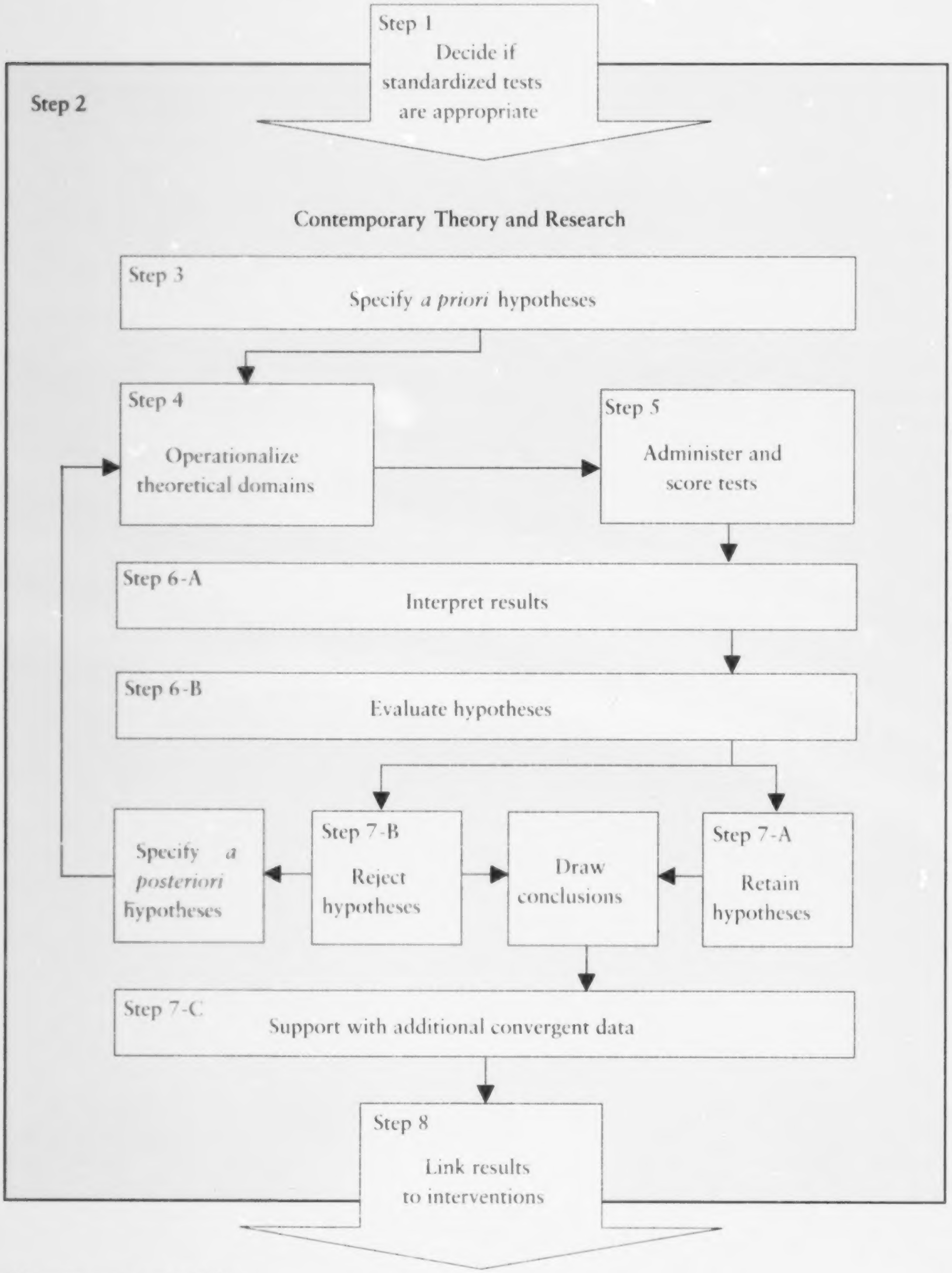
Up to this point we have attempted, with all the subtlety of a sledge hammer, to reinforce the notion that theory is quite literally "everything" when it comes to intellectual assessment and more specifically, the measurement of human cognitive abilities. Although at times we may have seemed to favor one theory over another, in truth it matters little as to what theory is utilized as long as it is current, empirically supported, and provides the necessary specifications for operationalizing its constructs in the course of practical, school-based or clinical assessment. The application of theory, however, cannot occur in a haphazard way. Successful and effective use of theory must be accomplished logically and systematically within the context of a comprehensive framework that guides each step in the assessment process and that specifies the manner in which theory is integrated. Poorly conducted assessment even with theory at the center is no better than methodically appropriate assessment conducted in the absence of theory. Only when sound assessment practices are augmented and guided by theory is the evaluation process enhanced significantly. It is in this spirit that we offer a proposal for an assessment and interpretation framework wherein theory is at the core of all activities.

The flow chart illustrated in Figure 1 depicts the general steps within the framework. Each step was developed in direct response to the specific problems described previously and that are inherent in any assessment conducted from an atheoretical or poorly supported theoretical basis. As will become evident, issues related to measurement, validity, interpretation, and intervention are all accommodated within the framework, precisely because theory is applied.

Step 1: Decide Whether Standardized Tests are Appropriate

The very act of deciding whether or not to use standardized tests of intelligence or cognitive ability represents a crucial step in intellectual assessment. Because of their convenience and efficiency, standardized tests represent perhaps the most common instruments and methods in cognitive evaluations. Nevertheless, adoption of these tests for evaluation purposes must be made carefully because administration of a standardized test to any individual is not a benign action. The decision as to the appropriateness or suitability of standardized tests for any given evaluation should be based on several broad criteria including the intended purpose for evaluation and specific referral concerns. Moreover, careful evaluation of individual case history information (e.g., educational records and authentic measures of achievement, medical records), consideration and appraisal of data from other relevant sources (e.g., parents, siblings, teachers, friends, employers), and reframing of an individual's difficulties within the context of their unique educational, cultural, or linguistic experiences should also enter into the decision

Figure 1. Framework for best practices in intellectual assessment


Step 1
Decide if standardized tests are appropriate
Step 2
Contemporary Theory and Research
Step 3
Specify *a priori* hypotheses
Step 4
Operationalize theoretical domains
Step 5
Administer and score tests
Step 6-A
Interpret results
Step 6-B
Evaluate hypotheses
Specify *a posteriori* hypotheses
Step 7-B
Reject hypotheses
Draw conclusions
Step 7-A
Retain hypotheses
Step 7-C
Support with additional convergent data
Step 8
Link results to interventions

Adapted from Flanagan & Ortiz, 2001.

equation. There are potentially many instances where the use of standardized instruments may be unnecessary, inappropriate, or questionable at best. Examples include assessment of individuals with perceptual disabilities, motor impairments, cultural or linguistic differences, and so forth.

Step 2: Apply Contemporary Theory and Research

Utilization of theory occurs at the outset of assessment. If school psychologists are to conduct assessment in a way that facilitates accurate measurement and meaningful interpretation, then it will come from a substantial knowledge base related to a modern and valid theory of intelligence. The process of assessment is guided by theory through knowledge or understanding of (a) the literature on the relations between cognitive abilities specified by the theory and specific academic and occupational outcomes, (b) the principles and philosophies that underlie the theoretical approach to assessing cognitive functioning, and (c) the network of validity evidence that exists in support of the structure and nature of abilities within the theory. In the early stages of assessment, this research knowledge base is crucial to understanding the specification of and relationships among the various constructs of interest. The correspondence between deficits in academic skills or performance and suspected underlying cognitive impairments is perhaps one of the more common issues informed by theory because it relates to learning disabilities assessment—the most common reason for assessment encountered by school psychologists. The ability to relate constructs to one another in ways predicted by actual theory and supported by empirical findings, provides a defensible basis for the formation and subsequent testing of *a priori* hypotheses related to the original referral concerns.

Step 3: Specify A Priori Hypotheses

Gathering data for the purpose of psychological evaluation is systematic when the data are used to evaluate *a priori* hypotheses. Use of an *a priori* approach "forces consideration of research and theory because the clinician is operating on the basis of research and theory when the hypothesis is drawn" (Kamphaus, 1993, p. 167). When case history data and current information are combined with knowledge of theory and research (or even information from other fields such as the literature on learning disabilities), defensible connections between various cognitive constructs can be made (e.g., between academic achievement and cognitive ability). For example, in the case of reading problems, a theoretically established research knowledge base can assist in identifying the most salient cognitive abilities related to reading achievement (e.g., phonological processes, working memory, naming facility or rapid automatic naming, lexical knowledge). Research and theory guide the development of assumptions that, in this situation, relate and connect particular cognitive constructs to manifest reading difficulties. Specification of this relationship provides both the logical target for evaluation and the basis for constructing hypotheses to test the expected predictions (see Flanagan & Ortiz, 2001).

Inferences regarding the relationships between various cognitive constructs set the stage for testing by allowing and guiding the creation of theoretically based predictions. The gathering of standardized test data not only allows for a test of these relationships but also relationships with respect to performance in directions that may be known or implied. However, there is a tendency in the development of hypotheses to couch them in terms of dysfunction or deficiency. Although we may suspect that an individual is disabled, the use of an hypothesis that predicts poor performance in one or more cognitive domains as a consequence or cause of a deficit in some other ability area (e.g., reading) too often leads to confirmatory bias. Confirmatory bias occurs whenever an evaluator collects data in an effort to support some preconception regarding the expected pattern of performance and is thus predisposed to see only those patterns in the data which support the preconception (Sandoval, 1998). To avoid this type of bias in assessment, hypotheses should be stated in null form and tested accordingly. For example, irrespective of any suspicions or other evidence regarding dysfunction, an individual's performance on any given standardized test should be predicted to fall *within normal limits*. Thus, unless and until the data show convincingly otherwise, individuals being tested should be accorded the very tangible benefits that accompany assumptions of normal functioning (see Flanagan & Ortiz (2001) and Flanagan et al. (2002) for a complete description of an hypothesis-driven approach to assessment and interpretation).

Step 4: Operationalize Theoretical Domains

In the previous step, theory provided a foundation for specifying relationships among and between constructs that could be readily tested via an hypothesis-driven approach. In this step, theory serves to guide the manner in which the specified constructs are operationalized in assessment. Historically, the test-kit mentality entrenched in the field of school psychology has resulted in the use of tests that were either atheoretical or based on outdated or vague theoretical notions. It is at this point that intellectual assessment must move in some way toward instruments or procedures that bring modern theory to the forefront of measurement.

One way in which Step 4 can be accomplished is through the use of an instrument that was developed specifically to operationalize the guiding theory selected at the outset (i.e., in Step 2). Unfortunately, the bleak history of test development with respect to theoretical issues and its over-reliance on rather nebulous and largely unsupported conceptions of *g* will make this step difficult to carry out unless the practitioner selects either CHC or PASS theory. To date, only the WJ III operationalizes CHC theory well and only the CAS purports to operationalize PASS theory. With the lack of available theory-based tests notwithstanding, these two instruments represent viable options for use in assessment. Unlike the new CAS, however, the WJ III is accompanied by a solid body of research. Its predecessor, the WJ-R, has been in use for over a decade and its underlying cognitive ability constructs, along with their counterparts on the WJ III, have been well validated. Although no battery of tests provides measurement of every construct specified by its base theory, and even though some constructs may not be well represented, use of standardized tests that are based on a guiding paradigm for assessment nonetheless represents a significant advance in the science of assessment of cognitive abilities.

An alternative to using a specific theory-based test in order to fulfill the requirements of Step 4 is the CHC Cross-Battery approach (Flanagan & Ortiz, 2001; Flanagan et al., 2002; Flanagan et al. 2000; McGrew & Flanagan, 1998). In recognition of the virtual lack of theoretically based tests, these authors developed a method for "crossing" batteries that is not limited by the parameters of any single test kit or tool. The need to provide adequate representation of the theoretical constructs relevant to the referral is an area where CHC Cross-Battery methods display particular merit. The loose theoretical heritage of most modern day tests creates a situation where use of a single battery very often fails to measure one or more constructs central to the need for assessment. By classifying tests in accordance with CHC theory, and by utilizing the extensive and comprehensive literature base that supports its development, the CHC Cross-Battery approach provides an innovative and viable method for ensuring that appropriate and sufficient data are collected with respect to the constructs of interest, in an efficient and defensible manner. The psychometric rigor of the approach, combined with the integration of modern intelligence theory creates a reasonable foundation for both psychological measurement and interpretation.

Irrespective of the method used to operationalize the theory selected to guide the assessment process, it is imperative that constructs be adequately represented with respect to construct validation principles (e.g., Messick, 1995). When such measurement is accomplished, interpretation of data is greatly facilitated and the derivation of meaningful conclusions is enhanced (Flanagan & Ortiz, 2001).

Step 5: Administer and Score Tests

Once Step 4 has been accomplished, the next step simply involves administration of the selected battery or cross-battery and scoring it in accordance with the specifications provided by the publishers of the tests or authors of the approach. Although it may seem that Step 5 is obvious, its delineation as a concrete step helps to reinforce the notion that it is a necessary component of the overall assessment process and that the generation of data is for the purpose of testing hypotheses. Application of theory in assessment represents an integrative, and as will be discussed, possibly recursive effort. In the initial phase of assessment, Step 5 activities relate to testing of the initial or *a priori* hypotheses specified in Step 3, but in subsequent phases of assessment, Step 5 may relate to testing of *a posteriori* hypotheses that emanate from Step 7. The process of assessment may become iterative and recursive as a function of the findings and the patterns in the data that either support or fail to support initial hypotheses. When it becomes necessary to conduct further testing, either to clarify ambiguous findings or investigate functioning more in depth or in alternate areas, it would not be unusual for administration and scoring to be accomplished more than once. Although administration and scoring of a selected battery of tests typically represents the final step in the assessment process, as far as standardized testing is concerned, more often than not it is necessary to gather additional data following evaluation of initial findings. Because follow-up testing is not common practice, diagnostic and placement decisions are often made in the absence of conclusive findings.

Step 6: Interpret Results and Evaluate Hypotheses

Step 6 is composed of two major interpretive activities: psychometric and theoretical interpretation of results and evaluation of hypotheses. Psychometric interpretation of test results forms Step 6-A (see Figure 1), and it is at this point where evaluation of numerical data collected within the context of theory-guided assessment is conducted. Although each test battery provides its own system and criteria for evaluating the meaning of results, especially with regard to classification or descriptions of performance, it is crucial that school psychologists not lose sight of the importance of evaluating performance against a normative standard. Test batteries have, of course, their norms readily available for making comparisons based on real, normal distributions corresponding to age or grade. The CHC Cross-Battery assessment approach utilizes the properties of the normal probability curve for making these evaluative judgments in the absence of a true norm group. In either case, the utility of the normal distribution is evident because it "has very practical applications for comparing and evaluating psychological data in that the position of any test score on a standard deviation unit scale, in itself, defines the proportion of people taking the test who will obtain scores above or below a given score" (Lezak, 1976, p. 123). Theoretical interpretation of results involves applying the validation research that specifies the relations between cognitive and academic abilities as well as other research pertinent to the referral (from the theoretical and research knowledge base that comprises Step 2).

Step 6-B in Figure 1, evaluation of hypotheses, actually represents an activity that is distinct but related to the interpretation of results conducted in Step 6-A. In order to test *a priori* hypotheses, a determination must be made as to whether the collected data are in line with performance expected to be within normal limits. Use of normative standards for evaluating these expectations is the only appropriate metric. Based on the evaluative judgments derived from normative comparisons completed in Step 6-A, school psychologists should decide whether the data suggest that the null hypothesis is supported, and should therefore be retained, or whether the data suggest that the null hypothesis is not supported, and should be rejected in favor of an alternative hypothesis. When the data are not seen to fall clearly and convincingly outside of normal limits, it must be concluded that performance is, as expected, within normal limits. When the data are seen to fall clearly and convincingly outside the normal range of functioning, it can be concluded that performance is not, as expected, within normal limits. The fact that performance may fall outside and below the normal range of functioning cannot, however, be used as *prima facie* evidence of dysfunction. Rather, the hypothesis-driven approach leads only to the conclusion that performance is not within normal limits. The reasons for this performance need to be clearly articulated within the context of theory and relevant research. The presence of a disability is but one possible reason out of many (e.g., motivation, attitude, anxiety, poor instruction, cultural and linguistic factors) for why the patterns observed in the data appear the way they do. Support for any hypothesis related to deficient performance must be established on the basis of convergent data culled from a wide variety of sources and should never be based solely on the results of standardized testing.

Step 7: Draw Conclusions or Specify *A Posteriori* Hypotheses

When assessment data are interpreted and evaluated according to theoretically specified *a priori* hypotheses, there are two broad possibilities with respect to the results. First, it is possible that functioning in all areas operationalized and measured according to theory fall within normal limits or higher, *as expected* (Step 7-A). If the theoretical constructs were appropriately constructed and adequately represented, then it can be reasonably concluded that there are no measured impairments in functioning and that performance is within normal limits. This is not to say, however, that no disability exists. Rather, it is only an indication that standardized test data simply do not provide support to conclude that performance is deficient in any way. Deficient performance may, of course, be established through other means and other types of data that do in fact converge to support particular conclusions (Step 7-C). With respect to inferences that may be drawn from standardized test data in this case, the only valid conclusions that can be made are that the standardized test data support hypotheses related to normal functioning.

Evaluation of standardized test data in isolation is problematic because there is no logical reason to assume that only these type of data will provide relevant information upon which to base conclusions. Moreover, theory-driven assessment is not solely dependent on findings generated from the use of tests. Performance along any process or ability dimension of theory-driven assessment may well be evaluated and established through the collection and evaluation of any available data (Step 7-C). Standardized test data represent but one element of information that should be integrated with other data in order to understand and evaluate performance as it relates to both direct observations and evaluation of hypotheses regarding functioning. If indeed there are sufficient other data that provide a clear convergence toward substantiating conclusions about performance and these data are consistent with standardized test data that reveal normal functioning, there would be little reason to engage in any further assessment or specification of *a posteriori* hypotheses.

The second, and perhaps more probable, outcome from assessment is that one or more areas of functioning are found to be outside of and below normal limits. This outcome is likely because the referral process itself is selective and the decisions to engage in assessments are generally based on preliminary evidence of problematic performance. Other than efforts directed at identifying gifted or talented individuals, assessment activities usually revolve around determinations regarding dysfunction or disability. When the data suggest that performance cannot be construed as average or within normal limits, then the null hypothesis is rejected and the practitioner may either draw conclusions and support them with additional convergent data or specify *a posteriori* hypotheses (discussed next). When the data provide contradictory, ambiguous, or insufficient evidence upon which to base such evaluative decisions, the process of theory guided assessment becomes iterative due to the need for additional assessment.

In cases where it is deemed necessary to investigate anomalous or ambiguous findings, practitioners need not abandon the hypothesis-driven approach but rather should continue its use in the specification of *a posteriori* hypotheses (Step 7-B). Perhaps the most common situation where the need for additional testing may arise occurs when there is a significant difference between two measures of a particular cognitive ability that fail to converge as might be predicted or expected according to theory, research, and the construct validation literature (e.g., Messick, 1995). On occasion, and for a wide variety of reasons (differences in narrow ability performance, differences in task demands, administration influences, cultural or linguistic factors, chance, error, and so forth), convergence may not be found and there may in fact be an unexpected significant difference between scores. Nonconvergence of indicators (i.e., subtests) that are expected to converge is virtually impossible to interpret in the absence of the administration of additional tests (Flanagan & Ortiz, 2001).

Supplemental testing, just as with initial testing, is guided by the specification and testing of hypotheses. These *a posteriori* hypotheses are constructed in the same manner as the *a priori* hypotheses. That is, they are based on assumptions of normalcy and, in order to test these hypotheses, it is necessary to return to Step 4 in the assessment process where operationalization of the relevant theoretical domains is conducted a second time. The assessment process proceeds much the same as before, returning eventually to Step 7. This iteration in assessment assists in "narrow[ing] down the possibilities" or reasons for the existence of a particular finding (Kamphaus, 1993, p. 166) and can be continued until all hypotheses are properly evaluated and valid conclusions may be drawn. At this point in the assessment process, the meaningfulness of the conclusions drawn from standardized test data can only be realized fully when such conclusions are supported with additional convergent data (see Step 7-C in Figure 1). In other words, evaluation of data and the process of drawing conclusions represent an integrative effort that is accomplished via examination of all available data that extends, in many cases, well beyond standardized test data.

Step 8: Link Results to Intervention

The process of theory-driven assessment does not require adherence to any particular report format or template. Nevertheless, the application of theory will modify the manner in which results are interpreted and translated into recommendations for interventions primarily because the predictable nature of the relationships among and between constructs now represents a central component in establishing greater validity for conclusions (see Flanagan & Ortiz (2001) and Flanagan et al. (2002) for case study examples). Whatever the selected guiding theory, the report should include at a minimum a clear explanation of the basis for assessment, the reasons why specific constructs may have been evaluated and others not, the relationship between substantiated deficits in cognitive ability and any presenting or referral concerns or manifest skill deficits (e.g., academic functioning). More importantly, however, because the application of modern theory provides a defensible platform for both measurement and interpretation, stronger statements regarding causal links and avenues for appropriate remediation and logical intervention can be made (e.g., Mather, 1991).

The greater precision achieved in measuring constructs inherent in theory-driven assessment as well as the specification of empirically supported relationships between and among constructs lends itself readily to the development of recommendations for intervention. For example, when a weakness in an academic skill is identified, it can probably be construed according to theory and research as being reasonably due to the presence of a weakness in a related area of cognitive ability. Remedial instruction can therefore either target the area of weakness in efforts to improve functioning both directly (at the academic skill level) and indirectly (at the ability level) or provide strategies that capitalize on any strengths that may have been identified, or both. It is important to remember that knowledge regarding the probable causes of poor performance is half the battle in guiding and informing the development of appropriate instructional modifications. Without an understanding of probable causes, planning remedial strategies is difficult. For example, remedial instruction for a young child with reading difficulties presumably caused by poor instruction and attendance will likely differ from instructional strategies developed for a child with reading difficulties that are presumably caused by phonetic coding and working memory deficits.

SUMMARY

There is perhaps no other area of school psychology that has changed as little as that of intellectual assessment, and the time has come for more significant strides in improving the practices of the past. If indeed the paradigm shift toward problem solving as the foundation for school psychology service delivery is to be realized fully within the context of intellectual assessment, then the pace will need to quicken. Current practices in intellectual assessment have long roots and a grand history, but progress seems almost measurable in geological units. We have discussed many of the diverse reasons that account for such slow incremental change in intellectual assessment, including the role of tests in professional identity, neglect of theoretical issues in guiding test construction and interpretation, stagnation of instruction in training programs, perpetuation of clinical lore and other atheoretical interpretive methods, and failure to link assessment to intervention and problem solving activities in the schools. Each of these will require attention. However, foremost among them will be the requisite attention that must be paid to placing theory at the center of all intellectual assessment activities. As has been noted, the lack of theory to guide practice is unacceptable given the impressive advancements that have been made in theories of intelligence and the structure of human cognitive abilities. Theory is required, not merely because it maintains the sanctity of the scientific process, but because it provides the basis for accomplishing every aspect of intellectual assessment that is crucial to the practice of school psychology. Theory guides instruction, test selection, and interpretation as well as intervention and problem solving. Theory is transdisciplinary. Lack of theory precludes validity. Yet, theory is not enough. Best practices in intellectual assessment will not emanate from the development or application of a great new theory of intelligence any more than it will result from publication of a great new "IQ" test. Best practices in intellectual assessment (as with any type of assessment) will come from the application and use of a systematic, comprehensive assessment and interpretation framework that integrates the various issues we have highlighted in this chapter. School psychology may have been born in the prison of the IQ test, but the cell door has been unlocked. The time has come for us, as a profession, to emerge from the confines of the prison cell's dark and decrepit walls into the light of a new era.

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This book presents cross-battery assessment and interpretation principles and procedures as a means to modernize the use of the Wechsler Intelligence Scales. In this book, the Wechsler Scales are described in terms of their contributions to research and practice and are placed firmly in the current, theory-based trend of intelligence-test interpretation. The Wechsler Scales are described according to the extent to which they operationalize prominent abilities specified in contemporary theory on the structure of intelligence. This book shows how contemporary theory can be linked to the applied measurement of cognitive abilities using the Wechsler Scales. More specifically, it imposes a strong substantive framework to the interpretation of the Wechsler Scales via Flanagan and McGrew's cross-battery approach. The end result is the derivation of more valid inferences from Wechsler test scores. The Wechsler-based cross-battery approach to assessment described in this book provides practitioners with the knowledge and skills necessary to ground cognitive ability assessment and interpretation with the Wechsler Scales in strong theory and research, and to conduct assessments in a more psychometrically and theoretically defensible manner.

Flanagan, D. P., & Ortiz, S. O. (2001). *Essentials of cross-battery assessment*. New York: John Wiley.
This book presents a general overview of cross-battery assessment and interpretation principles in an easy-to-follow format. Two cross-battery methods are offered: comprehensive cross-battery assessment, which ensures that the widest range of broad cognitive abilities and processes is represented in assessments in accordance with contemporary psychometric theory and research; and selective cross-battery assessment, which ensures that the abilities and processes that are most closely related to well-defined referral issues are assessed thoroughly. In this book, the authors also extend their cross-battery procedures further in order to address issues of interpretive bias and nondiscriminatory assessment that often arise when assessing individuals with cultural and linguistic backgrounds that differ from those of the U.S. mainstream. Through their provision of easy-to-follow steps, data summary sheets, and worksheets, these authors demonstrate how practitioners can improve upon reliability and validity in assessment and use current theory and research to enrich and inform interpretations of cognitive function and dysfunction.

Flanagan, D. P., Ortiz, S. O., Alfonso, V. C., & Mascolo, J. T. (2002). *The achievement test desk reference (ATDR): Comprehensive assessment and learning disability*. Boston: Allyn & Bacon.

A useful companion to McGrew and Flanagan's *Intelligence test desk reference (ITDR): Gf-Gc Cross-battery assessment*, this book provides comprehensive information about the most important psychometric, theoretical, and qualitative characteristics of the major achievement batteries, including the WIAT-II, WJ III ACH, DAB-3, DATA-2, KTEA/NU, and PIAT-R/NU. In addition, test characteristics are summarized for brief/screening measures as well as special-purpose batteries that are used to assess specific academic skill areas such as reading, math, writing, oral language, and phonological processing. This information, contained in an easy-to-read, visual-graphic format, is a foundational source that is invaluable to practitioners who conduct academic assessments. In addition, this book offers a comprehensive framework for LD determination and provides practitioners with a step-by-step decision making process in responding to learning-related referrals. Therefore, it offers an in-depth discussion and presentation of the theory and research relating to LD assessment and diagnosis.

McGrew, K. S., & Flanagan, D. P. (1998). *The intelligence test desk reference (ITDR): Gf-Gc Cross-battery assessment*. Boston: Allyn & Bacon.

This book provides comprehensive information about the most important psychometric, theoretical, and qualitative characteristics of the major intelligence batteries, including WISC-III, WAIS-III, WPPSI-R, KAIT, K-ABC, SB:IV, DAS, and WJ-R. In addition, test characteristics are summarized for more than 20 special-purpose cognitive ability tests that are used to assess the cognitive capabilities of diverse populations and to supplement intelligence tests (e.g., Leiter-R, UNIT, CAS, C-TONI, WRAML, etc.). This information, contained in an easy-to-read, visual-graphic format, is a foundational source that is invaluable to practitioners, particularly those who employ cross-battery techniques. In addition, this book was the first to introduce formally cross-battery assessment to practitioners. Therefore, it offers an in-depth discussion and presentation of the theory and research underlying cross-battery assessment.

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Best Practices in Interventions for School Psychologists: A Cognitive Approach to Problem Solving

Jack A. Naglieri
George Mason University

OVERVIEW

The purpose of this chapter is to illustrate how interventions can be linked to cognitive assessment within a problem-solving context. The chapter focuses on cognitive assessment methods as a means of understanding the nature of the problem and what might be done to solve the problem (instructions that are rooted in cognitively based educational principles). The approach combines a way of thinking about intelligence as specific cognitive processes and a way of teaching that places emphasis on the cognitive activities involved in academic tasks, sometimes referred to as cognitive education. In order to place this new approach to intervention within a larger context, the chapter begins with a brief look at the current state of the art of using results from traditional IQ tests. Next, cognitive education will be defined and illustrated and the steps needed to go from cognitive assessment to cognitively based interventions will be discussed. An illustration of using a cognitive approach to assessment and intervention will be provided along with instructional handouts that school psychologists could give to a teacher or parent. This illustration is intended to show how the connections between cognitive assessment and cognitively based educational methods may be achieved and how it may be conducted within a problem-solving context.

BACKGROUND

The concept of using results from an intelligence test to guide educational recommendations and interventions is intuitively appealing, yet traditional IQ tests have been criticized for providing limited information for intervention design (Reschly & Grimes, 1995). This limitation has been recognized for some time. For example, Kaufman and Kaufman took a historically important step about 20 years ago when they suggested that tests of intelligence like their Kaufman Assessment Battery for Children (K-ABC; Kaufman & Kaufman, 1983) could be used for instructional decision making. While the K-ABC made many important contributions to the assessment of intelligence, the suggestion that their measure of ability could be used to guide intervention is one of the ways in which that test distinguished itself. More recently, Ashman and Conway (1997) have suggested that tests like the K-ABC or the more recent Cognitive Assessment System (CAS; Naglieri & Das, 1997a) could be combined with cognitively based educational approaches to aid in the development of interventions to provide more effective instructional environments for children.

Peverly (1994) noted the value of a cognitive approach in a review of the potential impact of cognitive psychology on school psychology. He wrote that instructional "programs that include the knowledge of cognition and the regulation of cognition have proven to be very successful in improving students' academic performance, especially in the domain of reading and especially for poorer learners" (p. 304). Perverly also stated that methods that carefully evaluate the child's knowledge of the curriculum (e.g., curriculum-based assessment), although useful, are limited and should be "supplemented by knowledge of the cognitive processes that underlie competency in those skills" (p. 301). In this chapter cognitively based educational intervention approaches will be offered as viable methods for improving academic outcomes for children, especially when they are tied to the results of cognitive assessment that informs the school psychologist about the child's underlying cognitive competencies as suggested by Peverly (1994).

LINKING ASSESSMENT TO INTERVENTION

When intelligence test scores are used to guide the selection of interventions to help a child with poor academic performance, the concept of an aptitude-treatment interaction (ATI) is being used. The concept, which is intuitively attractive and logical, assumes that individual differences in abilities (aptitude or underlying cognitive competencies) need to be taken into account when interventions or treatments are being planned (Snow, 1991). Snow defined aptitude as "a complex of personal characteristics identified before and during treatment that accounts for a person's end state after a particular treatment" (p. 205). That is, there are child characteristics that are assumed to be relevant to the extent to which a child benefits from one type of intervention over another resulting in an interaction between the aptitude and the treatment. Although the term aptitude is not limited to intelligence (it could include variables such as personality or motivation), in this chapter the focus will be on non-traditional intelligence tests that measure cognitive processing. In this discussion the way in which aptitude, or in this case intelligence, is defined takes on critical importance.

School psychologists have traditionally defined aptitude by using IQ tests, particularly the Wechsler intelligence scales. This test is built on the concept of general ability developed in the early part of the last century. The vagueness of the concept is apparent in Wechsler's (1939) definition of intelligence: "the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment." Interestingly, when writing about the origin of the concept of general intelligence, Pintner (1925) wrote, "we did not start with a clear definition of general intelligence... [but] borrowed from every-day life a vague term implying all-round ability and knowledge, and ... we [are] still attempting to define it more sharply and endow it with a stricter scientific connotation" (p. 53). This statement, although written more than 75 years ago, is as true today as it was then.

Many practicing school psychologists have attempted to obtain information that can be used within an ATI conceptualization by going beyond the composite IQ scores from the Wechsler. To do so they have interpreted the Wechsler subtests, scales, and indices in many ways to extract meaning out of this test of general intelligence. School psychologists and other professionals have often relied on authoritative books like *Intelligent Testing With the WISC-III* by Kaufman (1994b) and *Assessment of Children* by Sattler (1988). These books are important attempts to help school psychologists do something with the Wechsler scales that goes well beyond its capabilities because intervention design demands more than the IQ scores a test of general intelligence provides. In order to further examine this problem, a brief review of where the test came from is needed.

Kaufman and Lichtenberger (2000) and Naglieri (1999) describe sources from which Wechsler developed his tests. Verbal subtests like Vocabulary, Similarities, and Comprehension were largely based on the Stanford-Binet whose work also influenced the U.S. military testing program. Reading the book *Army Mental Tests* by Yoakum and Yerkes (1920), provides an enlightening look at the sources of Wechsler's subtests. There are striking similarities between the task names, descriptions, and instructions included there and the present day Wechsler scales. The Army tests were organized into verbal and nonverbal portions so that a wide variety of persons could be effectively assessed. The verbal and nonverbal tests could be effectively given to those who could speak English, but for those with limited English language skills only the nonverbal tests were used. This is an obvious and simple idea that formed the basis for the partition of the Army Alpha and Beta tests and the Wechsler-Bellevue Scales (Wechsler, 1939). Nonverbal tests provide an efficient solution to the problem of assessing general intelligence for persons from diverse cultural and linguistic populations and are still used today, as illustrated by the recent publications of nonverbal individual (Universal Nonverbal Intelligence Test by Bracken and McCallum (1998)) and group (Naglieri Nonverbal Ability Test by Naglieri (1997)) tests. Thus the organization of tests into Verbal and Performance Scales on the Wechsler tests can be considered a dichotomy of convenience rather than a representation of two different types of intelligence. Many have published important works to help us interpret these verbal and nonverbal tests in a variety of ways, each designed to go beyond the overall IQ scores.

There have been many attempts to find theoretical explanations for the Wechsler subtests. Kaufman (1994a, 1994b) and Kaufman and Lichtenberger (2000) provided outstanding texts for interpretation of the various Wechsler scales so that practitioners may extract meaning from the many scores the test yields by using a mixture of psychometric analysis, knowledge of the research, and clinical judgment. Others have provided similar texts to better understand the results of the Wechsler, and other tests of general intelligence (e.g., Sattler's 1988 text), and there have been many published papers on how to interpret the subtests. Among the most recent attempts to provide school psychologists with still another way to interpret the Wechsler is the cross-battery approach (McGrew & Flanagan, 1998), which applies a Gf-Gc model. This reinterpretation in particular has a basic limitation noted by Kaufman (2000) when referring to Horn's Fluid/Crystallized approach and the related Carroll model:

> There is no empirical evidence that these approaches yield profiles for exceptional children, are directly relevant to diagnosis, or have relevance to eligibility decisions, intervention or instructional planning—all of which are pertinent for school psychologists (p. 27).

It is becoming more apparent that while there are many possible ways to interpret the Wechsler scales, these methods have not resulted in improvements in diagnosis or interventions for children with academic problems (Naglieri, 1999; Reschly & Grimes, 1995). It is reasonable, therefore, to suggest that the quest for obtaining meaning from the various Wechsler scores does little to help practitioners move from assessment to intervention. This is not as much a criticism of the general intelligence approach as recognition that this way of conceptualizing ability is better used as an overall estimate of ability rather than as a tool for differential diagnosis and treatment planning.

The view that Wechsler's scales are not based on firm theoretical concepts of verbal and nonverbal intelligence but rather on the vague concept of general intelligence (e.g., a global aggregate or all-round ability and knowledge concept) with subtests that contain verbal and nonverbal content helps us see why this approach does not lend itself to being useful within the ATI context. In order to have an interaction between a child's underlying ability and some instructional method, there needs to be a clear conceptualization of what the underlying ability is. There also must be a good understanding of the underlying component of the instructional method using the same theoretical basis. That is, in order to show an interaction between an aptitude and performance in the classroom, the same underlying cognitive component should be involved in both. This will be illustrated later in this chapter by using methods that come from the cognitive education literature. It is, however, important to understand the basic elements of a cognitive approach to education.

Cognitive Education

One important purpose of education is to provide children with the knowledge and skills they need in order to be productive members of a society. Considerable emphasis has been placed on teaching children facts like who discovered America, how to solve a math word problem, what sounds each letter and letter combinations make, what the components of a proper sentence are, and so forth. Knowledge and skill acquisition has been and continues to be essential to success. It is becoming apparent, however, that in addition to teaching students knowledge and skills that seem important today, teachers also need to help children learn how to effectively manage situations that they will face well after schooling is completed. Modern instruction should help children acquire knowledge and skills, but, more importantly, "to plan and control, to think and inquire, to evaluate and reflect" (Scheid, 1993, p. 3). This means that knowledge and skills as well as the cognitive dimensions of learning are relevant in the classroom. A cognitively based educational approach teaches children knowledge and skills as well as effective ways of *thinking*.

Ashman and Conway (1997) describe cognitive education as an approach to improve outcomes for children that is based on the merging of education and cognitive psychology based upon theories of human thinking and intelligence applied to instruction. Scheid (1993) stated that "cognitive instruction emphasizes the development in students of a reflective, self-reliant learning style" (p. 2) which is markedly different than a behaviorist point of view. Miller, Galanter, and Pribram (1960) noted that a behavioristic approach discourages the psychologist from speculating or examining (through the use of a test, for example) about the processes used by a learner. Instead, the behaviorist deals with how the teacher structures the environment and provides reinforcement and punishment, for example, to obtain desired student behaviors and reduce unwanted behaviors. The cognitive psychologist directs efforts toward careful observation and testing of the learner's abilities to, for example, work with spatial tasks, situations that demand different types of attention, and problem solving to explain performance. The cognitive approach is one "which explicitly tries to describe what is going on in the brain, in addition to observing what behavior that brain produces" (Kirby & Williams, 1991, p. 52).

Cognitive and behaviorally oriented approaches to learning, while both interested in behavior of the organism, depart considerably in basic assumptions. The behavioral approach takes the position that a child learns from practice and reinforcement making memorization of facts and rules a fundamental way of learning (Scheid, 1993). Students are viewed as recipients of information whose role is to absorb facts delivered and organized by the teacher. In contrast, in a cognitive education approach the child is seen as an active participant who interprets information that is received, relates it to previously acquired facts, organizes and stores it for later use, develops ways of doing things, and critically examines information. From this approach "learning is perceived as a complex process that does not proceed in a neat, linear manner, but rather in recursive phases. What students are capable of learning is influenced by developmental factors, by the amount of expertise they have about a subject or topic, and by what they know and understand about how to approach learning strategically" (Scheid, 1993, pp. 3–4).

Reading is an excellent skill to illustrate the cognitive perspective. Children with reading problems often struggle with word recognition and devote so much of their efforts to decode words that little time is left for other important aspects of reading. Some educators have focused on teaching children word recognition skills through drill and practice to increase automaticity. "While word recognition automaticity is clearly important, it is not sufficient to guarantee successful reading" (Scheid, 1993, p. 5). It is well documented that success in reading comprehension requires, for example, the use of strategies such as looking back at the information given, focusing on the relevant from irrelevant information provided, using good methods to analyze the passage, and paying special attention to answer the specific questions that were asked (Pressley, 1998; Pressley & Woloshyn, 1995). A cognitive education approach to reading instruction aims to help students develop strategies for reading decoding using their prior knowledge and skills. It also helps them construct mental images or pictorial representations of the text (e.g., Story Maps), learn to summarize as they read, and be active participants in the activity of reading.

The cognitive education approach puts emphasis on both the academic skills the child must learn as well as the cognitive processes the child uses in the act of learning. Additionally, this approach views teaching and learning as an ecosystem in which the characteristics of the teacher, the setting, the curriculum, and the child interact to lead to academic success or failure. Knowing the cognitive competencies or deficiencies of a learner is, therefore, a critical element in a complex process that leads to effective learning (Naglieri & Ashman, 1999). Instructional design as well as intervention can be most efficiently conducted, therefore, when a child's knowledge and skills as well as levels of competence in basic psychological processes are known (Peverly, 1994). The question then becomes, *What are the basic psychological processes that are important for children's academic success?*

Basic Psychological Processes

The cognitive processes related to academic skill acquisition need to be clearly understood if the connection between a child's cognitive processing competence and academic performance can be understood (Peverly, 1994). This demands a strong theoretical perspective and assumes that the school psychologist has a working knowledge of the cognitive processes. This is important because the cognitive demands of the academic tasks need to be determined and these demands related to a theory of cognitive processing. One approach to defining cognitive processes is the PASS (Planning, Attention, Simultaneous, Successive) theory, which is measured using the CAS (Naglieri & Das, 1997a). This theory is well supported by a considerable amount of research summarized in the *Cognitive Assessment System Interpretive Handbook* (Naglieri & Das, 1997b) and in *Essentials of CAS Assessment* (Naglieri, 1999). The CAS provides the most extensively validated way to measure the four processes defined as follows:

1. Planning is a mental activity that provides cognitive control, use of processes, acquisition of knowledge and skills, intentionality, and self-regulation.

2. Attention is a mental activity that provides focused, selective cognitive activity over time and resistance to distraction.

3. Simultaneous is a mental activity by which the child integrates stimuli into inter-related groups.

4. Successive is a mental activity by which the person integrates stimuli in a specific serial order to form a chain-like progression.

The four processes measured by the CAS have been found to have a greater correlation with achievement than do traditional IQ tests; yield profiles of PASS scores that are sensitive to the cognitive problems experienced by children with, for example, Attention Deficit/Hyperactivity Disorder and reading disabilities (Naglieri, 1999); yield the smallest differences between white and African-American children (Wasserman & Becker, 2000); and relate to intervention (Naglieri & Gottling, 1995, 1997; Naglieri & Johnson, 2000). Additionally, extensive research evidence that supports the validity of the separate PASS scales is provided. For example, Naglieri and Das (1997b) reported that the standardization sample children who used strategies to solve the planning tests earned good scores on those subtests while the children who did not use strategies earned low scores. Importantly, strategy use (Planning) has also been related to interventions that improve performance in mathematics calculation (Naglieri & Gottling, 1995, 1997; Naglieri & Johnson, 2000). The relationship between PASS and academic improvement found in these research papers in combination with research on differential diagnosis provides ample support for the use of CAS for building interventions, especially when a child has a cognitive weakness (which will be described in greater detail later in this chapter) in one of the PASS scales.

Evidence That Cognitive Interventions Can Work

Perhaps the research most relevant to using cognitive processing information to improve educational outcomes is the planning facilitation research most recently illustrated by Naglieri and Johnson (2000). This research, which is based on the work of Cormier, Carlson, and Das (1990) and Kar, Dash, Das, and Carlson (1992), utilized a method that stimulated children's use of planning, which had positive effects on performance. The method was based on the view that planning processes should be facilitated rather than directly taught so that children discover the value of strategy use without being specifically told to do so.

The studies reported by Cormier et al. (1990) and Kar et al. (1992) demonstrated that students differentially benefited from a technique intended to facilitate planning. They found that participants who initially performed poorly on measures of planning earned significantly higher scores than those with good scores in planning. The method encouraged a planful and organized examination of the demands of the task, and this helped those children that needed to do this the most (those with low planning scores). These studies were the basis for three experiments by Naglieri and Gottling (1995, 1997) and Naglieri & Johnson (2000) that focused on improving math calculation performance.

The two research studies by Naglieri and Gottling (1995, 1997) demonstrated that an intervention that facilitated planning led to improved performance on multiplication problems for those with low scores in planning, but minimal improvement was found for those with high planning scores. In that study learning disabled students benefited differentially from the instruction based on their cognitive processing scores, which suggested that matching the instruction to the cognitive weakness of the child was important. Naglieri and Johnson (2000) followed up on these studies and expanded the methodology by identifying children in the study who had a cognitive weakness in one of the four PASS processes as well as a no cognitive weakness group. A cognitive weakness was defined as an individual child's PASS score that is significantly lower than that child's average PASS score and a standard score less than 85. The results showed that children with a cognitive weakness in Planning improved considerably in math calculation problems that is very similar to the regular curriculum over math calculation performance during baseline while those with no cognitive weakness improved only marginally. Similarly, children with a cognitive weakness in Simultaneous or Successive or Attention also showed substantially lower rates of improvement in math performance. These results suggested that the PASS characteristics of the child showed a relationship to the response the child had to the instruction. Thus there was an interaction between the aptitude (PASS) and the treatment (planning facilitation).

The results of these studies are clear: Children who are low in planning improve considerably when given instruction that teaches them to be more strategic. In contrast, children who are not low in planning do not improve as much. What is important in this conclusion for the practicing school psychologist is that information about the PASS characteristics of the child was helpful when interventions were applied. The most improvement in a math activity that involved much planning was found for those who were disorganized and non-strategic (those low in planning). These children improved the most because they needed to be more organized, more strategic, and more planful. These findings for the planning facilitation method are also important from a more theoretical perspective because they are the *opposite* of what would be expected from past ATI research. Traditional ATI research has shown that children who are low in ability usually benefit the least from instruction while children who are high benefit the most. What these results most strongly indicate is that the PASS characteristics of a child need to be considered in relation to the PASS demands of an academic task when interventions are selected. In the remainder of this chapter some ways to link assessment to intervention will be described in more detail.

FROM COGNITIVE ASSESSMENT TO COGNITIVE EDUCATION

Four-Step Method

Naglieri and Ashman (1999) describe how the connection between cognitive assessment and intervention can be made. They suggested that for teaching and learning to be efficient, the process must include a careful examination of what is to be learned and how it will be taught in relation to the cognitive characteristics of the child. Using the PASS theory as a guide, they state that "knowing about the PASS cognitive competencies or deficiencies of a learner is a critical element in a complex process that leads to effective teaching and learning (p. 153)." Their approach involves four steps, each of which will be described below:

STEP 1

Assessment is the first step of a cognitive approach to instruction and intervention. Assessment is a complex task that involves many individuals such as teachers, parents, and perhaps the learner. The initial evaluation may be informal observations by the teachers that may lead to initial attempts to deal with the learning problem. When further efforts are required, more formalized methods such as norm-referenced or criterion-referenced assessments may be needed to determine if there is an academic weakness and/or cognitive explanation for the learning problems. Based upon the severity of the academic need different magnitudes of intervention may be indicated. The greater the academic need the more effort will be required and the closer the setting, curriculum, teacher, and learner dimensions should be examined. At this stage it can be important to carefully examine the child's cognitive competence in PASS cognitive processes and their connection to academic performance.

In order to take this cognitive assessment/cognitive intervention approach the school psychologist would work with the teacher to detect when the child's weakness in some area of PASS cognitive processing is related to academic difficulty. When a child's academic skill deficit has an associated cognitive processing deficit, then an intervention that takes into consideration the connection between these two dimensions is needed. If, however, a child has an academic skills deficit without a cognitive deficit, nor an emotional or behavioral or some other child-based problem, then the best intervention may be to provide additional instruction of the academic skill, make alterations to the environment, ensure that the child is exerting effort to learn, and so forth.

When a child has an academic problem and is weak in some area of cognitive processing and the cognitive demands of the academic tasks have been carefully examined, one option is to consider interventions that help the child use a different process when doing the academic work. For example, suppose that a child has difficulty learning basic math addition facts such as 9 x 6 = 54, and the teacher's instructional method is to make the child recite the phrase "nine times six equals fifty-four" or write the statement many times until the facts are remembered (become automatic). This task demands recall of information in a specific order, which demands considerable Sequential (from K-ABC) or Successive (from CAS) processing. If a child is poor in this type of processing, recall of the string of words could be very difficult. Thus, the problem may be that the processing demand of the task as presented by the teacher has a heavy reliance on Successive processing and the child has a cognitive weakness (Naglieri, 1999) in that area. Instruction that takes into account the underlying processing demand of the academic task needs to be selected or prepared. That is, it may be helpful to use a different instructional approach that has a different cognitive processing demand (this will be expanded in the description of step 2). At this point in the procedure, the child's knowledge and skills as well as cognitive competencies have been examined.

STEP 2

Preparation of the best teaching method is the second step in the instructional cycle described by Naglieri and Ashman (1999). This phase includes selection of the content, examination of the various methods available to help the child acquire the content, selection of the best materials, and consideration of the processing demands vis-à-vis the academic demands of the activity. Continuing from the example given previously, the teacher and school psychologist might collaboratively determine that the child needs to be taught basic math facts using a method that does not put so much emphasis on successive processing. One way to do that is to teach the child to use strategies for obtaining the correct answer (i.e., use more planning processing and less successive). When a strategy or plan is used in this way, the correct answer is arrived at by thinking about the problem (being strategic or planful) rather than by rote memory (which demands much successive processing). This alteration in the methods used changes the cognitive demands of the task considerably.

There are many strategies or plans that can be used to change the processing demands of a task like memorization of facts. When the teacher switches instructional methods in this manner the use of strategies (plans) for remembering basic math facts can have very positive results (Pressley & Woloshyn, 1995). Geary (1994) also stressed the importance of teaching children strategies for remembering math facts, and Goldstein and Mather (1998) provided a comprehensive list of strategies for remembering math facts. For example, in order to learn the 9 times tables the child may use a system of obtaining the answer as follows: For the problem presented above (9 x 6 = 54) the strategy works like this. Take 1 away from the multiplier (6), then add a number to that one which equals 9. For example, to calculate 9 x 6, you would say: 6 – 1 = 5, so 5 goes in the 10s place, and 5 + 4 = 9, so 4 goes in the 1s place making the answer 54.

Another example, using more basic math might involve the "doubles plus one rule." This rule teaches children that if they know the sum of two same numbers (7 + 7 = 14), then a problem like 7 + 8 is one more than 7 + 7. This strategy for obtaining the answer shifts the cognitive demand from one that demands recall of the specific series of words—"7 plus 8 equals 15" (which demands much successive processing)—to a planning rich activity where the child thinks to arrive at the answer. The child might say "7 + 8, I know 7 + 7 is 14, 8 is 1 more than 7, so the answer has to be 1 more than 14 which is 15." Shifting the cognitive processing demand of a task is an excellent intervention because not only does it help the child perform a task in a way that does not rely on his or her cognitive weakness but it gives the child a chance to be successful using strategies or plans as suggested by Geary (1994) and Pressley (1998).

STEP 3

The next phase in the cycle is *instruction*, which relates directly to the decisions made during the preparation phase. Here the identified methods are applied. This phase also includes elements of the final instructional cycle: *evaluation*. During instruction and at the end of the instruction phase the teacher should carefully monitor progress made by the child to fine tune the instruction as well as to evaluate the progress of the child.

STEP 4

After completion of the instruction, more formal evaluation should be accomplished. This might include a thorough curriculum-based analysis or formal standardized testing procedures. If the latter are used, then the treatment effectiveness evaluation method described by Naglieri (1999) should be applied because it provides a psychometrically sound approach that takes into account measurement issues such as regression to the mean and reliability of the measures.

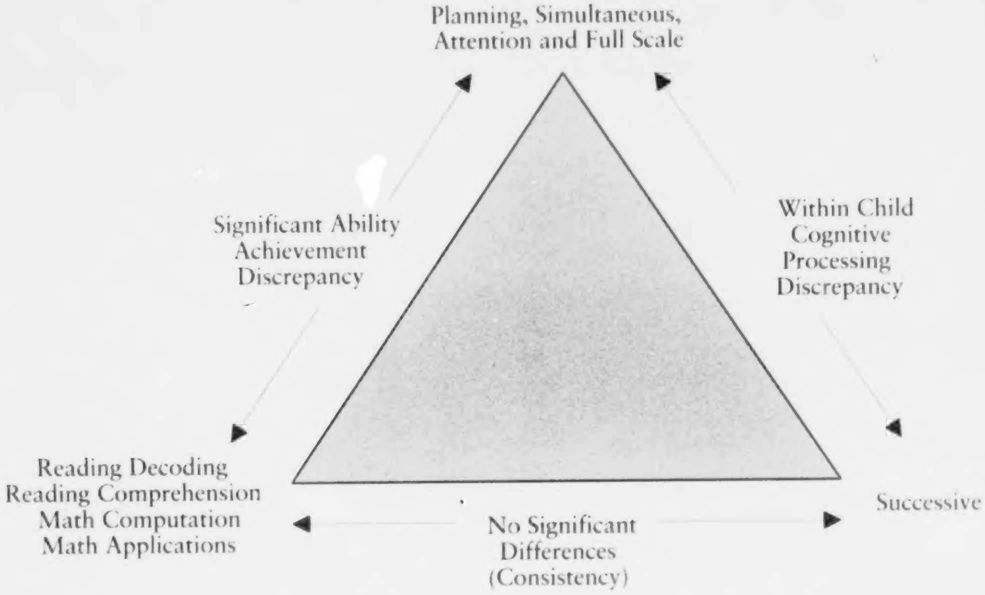
Instructional Planning and Eligibility Decisions

The instructional cycle described here could be conducted within many different contexts that may or may not involve questions of eligibility. School psychologists might work with a teacher to assist in the instructional process on an informal basis. In some instances assessment may include a formal test such as the CAS, not for the purpose of eligibility determination, necessarily, but for the purpose of instructional planning. If, however, eligibility is to be determined, then a comprehensive assessment must be conducted and then the assessment of cognitive processes should be used within that context. When the academic skills are poor enough to be described as a deficit and differences between the tests of achievement and cognitive processing are sufficiently large vis-à-vis state guidelines, then it may be possible to establish eligibility (e.g., learning disabled) as well as a cognitive plan for intervention. Naglieri and Sullivan (1998) showed how this could be accomplished. They suggested that when a discrepancy between the academic skill deficit and some adequate areas of PASS cognitive processing are found, evidence for a discrepancy is obtained. The discrepancy, alone, however, provides little information about the nature of the child's cognitive problem (if one exists). When a child also has significant variation in cognitive processing scores, and the low processing score is below normal, then a cognitive weakness has been found. The child with a significant difference between his or her high levels of cognitive processing and achievement and, in addition, a cognitive weakness accompanied by similarly low achievement scores should be considered within Individuals with Disabilities Education Act Amendments of 1997 (IDEA 97) regulations as potentially learning disabled (see Figure 1). That is, the determination of a discrepancy (processing and achievement) consistency (processing and achievement) can be used to determine if (a) the child meets eligibility requirements and (b) that a cognitive intervention may be appropriate.

The discrepancy/consistency approach can be used to help classify children as learning disabled when there is an academic failure and poor cognitive processing scores using the guidelines provided in IDEA 97. Naglieri and Sullivan (1998) wrote that using the PASS theory can provide evidence of a "disorder in one or more of the basic psychological processes [i.e., PASS constructs] involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, speak, read, write, spell, or do mathematical calculations" (p. 46). When a processing disorder has been found and there is cognitive variation within the child (i.e., a cognitive weakness is found) and academic problems, then in addition to relevant eligibility issues a cognitive education method may be appropriate.

The cognitive education approach presented here should be applied when a child has a discrepancy between a high cognitive processing score and a low academic score as well as similarity between the low academic score and a low cognitive processing score. Cognitive variation may be of two types: a relative weakness or a cognitive weakness. A relative weakness is found when at least one PASS scale standard score is significantly lower than the child's mean PASS score. Because the PASS scores are compared to the individual child's average (and not the normative mean of 100), this tells us about "relative" strengths or weaknesses. For example, if a child has scores of 114 (Planning), 116 (Simultaneous), 94 (Successive), and 109 (Successive), the Successive score, which is 14.25 points below the child's mean of 108.25, is a "relative weakness." This approach

Figure 1. Relationships among CAS and K-TEA scores


Planning, Simultaneous, Attention and Full Scale
Significant Ability Achievement Discrepancy
Within Child Cognitive Processing Discrepancy
Reading Decoding
Reading Comprehension
Math Computation
Math Applications
No Significant Differences (Consistency)
Successive

has been used in intelligence testing (see Kaufman, 1994a , 1994b; Naglieri, 1993; Sattler, 1988) for some time. In contrast, there are two requirements for a child to have a "cognitive weakness." The first is that a relative weakness is present, and the second is that the low cognitive processing score should be below normal limits (e.g., a standard score of 85, representing one standard deviation below the mean). Additionally, some area of academic skills deficit similar in level to the cognitive weakness should be present to indicate that some intervention is necessary. This distinction is important because Naglieri (2000) found that children with a cognitive weakness were more likely to have significant academic problems and have been previously placed in special education settings while children with a relative weakness were less likely to have experienced academic problems.

Illustration of the Cognitive Education Approach to Intervention

Step 1: Assessment

The examination of a child's academic problems is, as described above, multifaceted and may or may not involve decisions about eligibility. When initial attempts to solve educational problems did not meet with success or the severity of the problem warrants an in depth examination of the entire situation, it will be important to determine if a child has a cognitive weakness. In this illustration it is assumed that the academic problem detected by a teacher was not solved by initial pre-referral intervention efforts and the child was administered a test of cognitive processing (CAS) and achievement (K-TEA) as well as other relevant assessment methods not summarized here. The data presented in Table 1 are illustrative rather than actual.

The data provided in Table 1 are first analyzed by computing the child's PASS standard score mean and comparing each of the four PASS scores to that mean (see Naglieri, 1999, for more details). This allows the school psychologist to determine if a cognitive weakness is present. In this illustration the child's Successive Scale standard score is significantly lower than the mean of 94.25 and below a cut-score of 85 used to designate below normal functioning. This means that the child has difficulty with tasks that require the use of information in a specific series, the memory of serial information, and comprehension of information based on linearity (see Naglieri, 1999, for more information about interpretation of this process).

Table 1. PASS and K-TEA standard scores, comparison of PASS scales with the child's PASS mean, and comparison of CAS and K-TEA standard scores

CAS	*Standard scores*	*d*	*Values needed at p = .05*	*Sig/NS*
Planning	98	3.75	10.8	
Simultaneous	102	7.75	9.6	
Attention	96	1.75	11.1	
Successive	81	−13.25	9.5	Sig
PASS mean	94.25			
CAS FS	92			

		K-TEA versus each PASS and Full scale				
K-TEA	*Standard scores*	*Plan*	*Sim*	*Att*	*Succ*	*FS*
Reading Decoding	79	Sig	Sig	Sig	NS	Sig
Reading Comprehension	84	Sig	Sig	NS	NS	NS
Spelling	81	Sig	Sig	Sig	NS	NS
Math Computation	80	Sig	Sig	Sig	NS	NS
Math Application	83	Sig	Sig	NS	NS	NS

Note: Differences required for significance between the CAS and K-TEA are provided by Naglieri (1999).

Next, the separate PASS scale scores are compared to achievement. Each PASS score is compared to the K-TEA standard scores using tables of significance provided by Naglieri (1999). The results showed that Planning and Simultaneous scores are significantly higher than all of the K-TEA scores. This provides evidence of a *discrepancy* between ability (Planning and Simultaneous) and achievement (which could be used for eligibility determination). The Attention score is significantly higher than Math Computation and Math Application scores. The CAS Full Scale and Attention scores are also significantly higher than the child's Reading Decoding score. Importantly, there is no significant difference between the Successive score and the poor achievement scores. That is, there is *consistency* between the cognitive weakness in Successive and poor academic scores.

The lack of a significant difference between Successive and Reading Decoding (a relationship anticipated from previous research summarized in Das, Naglieri, & Kirby (1994)) provides a reasonable explanation for the academic problem. A strong relationship between word decoding and successive processing is reported in the literature (Das, Naglieri, & Kirby, 1994; Kirby & Williams, 1991). The poor reading comprehension is likely related to these decoding problems because the child's understanding is blocked by failure to adequately determine the words that are included in the sentences. Finally, the problems with math are related to the child's difficulty with mastery of basic math facts. This would be expected when a repetition of basic facts is used as the instructional method (e.g., the child writes or says the facts repeatedly until they are recalled quickly).

The relationships among the cognitive and academic measures are illustrated in Figure 1. At the base of the triangle are the weaknesses, those in achievement (Reading and Math) and one in cognitive processing (Successive). At the top of the triangle are the child's high scores. This includes the Planning, Simultaneous, and Attention scales as well as any other areas of achievement for which the child is competent. When this relationship is found, the practitioner has data indicating that a significant cognitive weakness and associated academic weakness have been detected.

STEP 2: PREPARATION

The methods available to help the child acquire the academic content are selected with careful consideration of the processing demands of the academic tasks. Continuing from the above example of a child with low successive processing, the demands of the current reading instruction need to be determined. This example illustrates a case where the PASS Remedial Program (PREP; Das, 1999) intervention would be appropriate because it teaches children things like the importance of attending to the sounds of events in order and helps the child apply good successive processing to reading. Other interventions that do not require the teacher to use a pre-packaged program include strategies for reading decoding and reading comprehension that the regular or special education teacher could apply.

A child with a successive processing weakness but adequate planning could be taught to utilize strategies to decode words as an alternative to sounding out the letters and the sounds that go with them. This is illustrated in Appendix 1, which is a handout developed by Naglieri and Pickering (2000). This intervention is a strategy (a plan) that can be used by children who have trouble decoding words, perhaps due to a successive processing weakness. Another appropriate intervention would be to utilize strategies to improve reading comprehension (Appendix 2). This method is designed to teach children the strategies used by good readers to obtain information from text. This includes teaching children how to integrate their prior knowledge with what is read, how to look for cues that help define the meaning of the text, and how to approach reading comprehension questions. In both these illustrations, the successive processing weakness is being addressed by teaching the child to approach the task with strategies, or plans, which engage planning processing. Thus, the processing demands of the task initially might have been very successive but with these interventions there is a shift toward a more strategic (planful) way of approaching the material. The same approach would be used to help the child be more successful in math calculation.

Two math calculation interventions are suggested. First, one strategy that helps a child with successive processing weakness learn facts without rote memory of a linear statement like $8 + 7 = 15$. The child who is taught to memorize these facts by repeatedly saying or writing the string of numbers and signs uses successive processing to commit the statement into memory. In contrast, the "Using Plans to Learn Math Facts" handout (Appendix 3) encourages teachers to help children use strategies for obtaining the correct answer. This intervention helps the teacher instruct the child to arrive at the answer using a strategy that changes the dominant cognitive process from successive (memory of the sequence of facts) to planning (obtaining the information via a strategy that is based on what was previously known). There are several strategies for math facts that are presented by Naglieri and Pickering (2000).

STEPS 3 AND 4: IMPLEMENTATION AND EVALUATION

Once the teacher and school psychologist have developed a plan, the methods are implemented. During this time the teacher should follow the concepts developed in the intervention plan in a flexible way and modify the method as the situation demands. Although frequent monitoring of progress is an important component of this step, evaluation of the effectiveness of the intervention (step 4) should occur after the treatment has been completed. Naglieri (1999) recommends that the effectiveness of the overall program of interventions should be made in comparison to initial results from standardized achievement tests. In this example, a K-TEA Reading Decoding score of 89 is needed to demonstrate reliable improvement over the initial standard score of 79. Refer to that source for more information and values needed for significance to demonstrate significant improvement over time.

PROBLEM-SOLVING MODEL

The use of a cognitive processing approach to evaluate a child's competence described here fits within a problem-solving model. For example, Deno's (this volume) description of the IDEAL problem-solving model includes five components: identify the problem, define the problem, explore alternative solutions to the problem, apply a solution, and look at the effects of that application. Clearly, the steps described earlier in this chapter fit these problem-solving components. For example, the first two components are a part of step 1 (Assessment) where the nature of the problem is identified (cognitive and academic difficulties) and if so then define the problem within the PASS theory. In the illustration provided above, the child was found to have a cognitive weakness in Successive processing and similarly poor performance in Successive processing. Thus the problem has been identified and carefully defined. Step 2 (Preparation) is accomplished in the third component of the problem-solving model – exploring solutions. Continuing with the illustration, at this point possible interventions such as PREP or those provided by Naglieri and Pickering (2000) are considered and a plan for intervention is prepared. Step 3 (Instruction) is the same as the fourth (apply a solution) and step 4 (Evaluation) is the same as the last component (look at the effects of that application).

The cognitive approach to understanding educational problems also fits with the problem-solving approach discussed by Tilly (this volume). He asks four basic questions: *What is the problem?* . Using the cognitive approach one might answer the questions as follows: The problem is that the child has not learned well from a phonics instruction because (why is it happening) she has considerable difficulty dealing with stimuli in order (poor successive processing) and does not use effective strategies while reading (poor planning). Instruction that takes into account processing weaknesses need to be applied so that instruction does not rely so heavily on successive processing and strategy instruction is provided for better reading. Finally, assessment of the effectiveness of the intervention will be needed. Thus, a cognitive approach to problem solving is illustrated.

CONCLUSIONS

School psychologists have long recognized the potential value of intelligence tests to examine children's abilities that may have relevance to instruction and interventions designed to overcome academic problems. Although widely used, the research on traditional IQ tests has not been supportive of use of these tests for understanding the cognitive problems associated with academic failure (a pre-requisite for development of an effective intervention) and therefore attempts to tie IQ test results to instructional design have been difficult to achieve. With the reconceptualization of intelligence as cognitive processes (e.g., the CAS), school psychologists can go beyond general intelligence (e.g., Wechsler's scales) and factor analytic models (e.g., Woodcock-Johnson III; Woodcock, McGrew, & Mather, 2001) for which evidence of instructional utility is lacking (Kaufman & Lichtenberger, 2000). In contrast, recent research has shown that cognitive processing results can provide important information relevant to cognitively based interventions (Naglieri & Gottling, 1995, 1997; Naglieri & Johnson, 2000). These positive results warrant further examination and continued field-testing, but when integrated with other cognitive educational methods, this collection of literature offers school psychologists valuable options. Taken as a whole, the results of these efforts to help children achieve better using cognitive assessment and cognitive educational interventions provide school psychologists with modern approaches that should be within every professional's repertoire.

In the book *Assessment of Cognitive Processes*, Das, Naglieri, and Kirby (1994) urge readers to recognize that progress in the field of human intellectual assessment and educational remediation "cannot be achieved if improvements consist mainly of revisions of old tests or reconceptualizations of the tasks included in old measures" (p. 12). They recognize that the time has come to move beyond the Wechsler scales and statistically derived approaches that do not have a theory base and more toward cognitive measures of basic psychological processes. This chapter provides some information about how the relationship between assessment and intervention might change if practitioners used measures of cognitive processing. This chapter has also illustrated how the application of information about a child's cognitive processes can be an important part of what school psychologists do when they translate assessment information into intervention plans. This method represents the merging of cognitive assessment and cognitive educational methods that require change on the part of school psychologists. Das, Naglieri, and Kirby (1994) noted this need for change when they wrote: "We are on the edge of a major transition from old theories that limited us to new approaches that offer alternatives (p. 204)." The time has come for practitioners to consider new ways of measuring intelligence so that they move from cognitive assessment to cognitive intervention.

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Appendix 1. Example of a teacher handout for reading decoding

IMPROVING READING DECODING USING THE READING BY ANALOGY STRATEGY

Jack A. Naglieri, Ph.D.
George Mason University

Eric Pickering
The Ohio State University

Background

Fluent reading requires good reading decoding, which involves making sense out of printed letters and words including understanding letters, what they represent, how they work together, and how they relate to sounds. Decoding involves several cognitive processes but particularly successive processing. Knowing what order letters, letter sounds, and words must be in to make sense requires successive processing. Understanding how letters and word parts relate to one another requires simultaneous processing. Using strategies for decoding involves planning. Attention is needed for recognition of details such as letter orders (ie or ei), punctuation, focus on the story line, etc.

Decoding is important for basic reading as well as for fluent and successful comprehension. Good readers are able to decode words quickly and easily and therefore can devote more attention to comprehending what is read. A strategy like comparing known words to new words with similar spelling patterns may be helpful for the student having trouble decoding a word or text for the first time. The strategy, Reading by Analogy, may be helpful for a student having difficulty decoding new words and who may be poor in successive or planning on the CAS.

Reading by Analogy Strategy

Words that sound the same often are spelled similarly. This can be used to help a child who knows how to pronounce a word such as "tank" to make a reasonable guess at "rank." The same student might also have a good chance at pronouncing "bank," "Frank," and "thank" if he or she were to use the Reading by Analogy strategy. In Reading by Analogy students are taught to compare words they do not know to similar words they do know.

One way to present the Reading by Analogy strategy is to explicitly teach it and then introduce new target words along with five to six new words that can be related to words the students already know. In this method, students are encouraged to learn the new words by analogy and are asked why and how the strategy helps them. Each word is presented on a sheet of paper and the students are instructed to write two or three other words that share the same spelling pattern. After this stage, the students are asked to read passages containing the new words and are encouraged to use analogies to decode them. The teacher should model the use of analogies while reading and provide feedback for the student independently using the strategy.

Once the strategy is taught, modeled, and the students have practiced it, they may be simply encouraged to use the strategy whenever they encounter new words. It may be helpful for the teacher to post a list of words the students know by sight that they may refer to when they encounter a new

Appendix 1. (continued)

word. It is important to consider that reading by analogy need not be confined to simple words or comparisons such as "bug," "hug," and "rug." More complex words and analogies can be made, for example, the words "at," "tent," and the suffix "–tion" may be put together or "analogized" to form attention. Although not a direct combination, this analogy can serve to help the student approach the word thoughtfully and independently.

The Teacher Role

- Discuss the rational or helpfulness of the strategy
- Use and model the strategy
- Provide the student ample opportunity for practice
- Provide feedback
- Encourage the use of the strategy

Use

Children who are poor in successive processing will likely have decoding problems (Das, Naglieri, & Kirby, 1994) and those with planning weakness will have few plans to help them learn how to decode. This strategy for reading decoding using the analogy method should be applied when the child has a successive and/or planning weakness along with reading decoding failure.

Resources

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Appendix 2. Example of a teacher handout for reading comprehension

IMPROVING READING COMPREHENSION WITH STRATEGIES

Jack A. Naglieri, Ph.D.
George Mason University

Eric Pickering
The Ohio State University

Background

Expert readers use a variety of strategies to understand what they read. They combine their background knowledge with context cues to create meaning, monitor their ongoing comprehension solving comprehension problems as they read, and they evaluate what they have read (e.g., Is the content believable? Does it make sense?) (Pressley & Woloshyn, 1995). This thoughtful approach to reading takes planning, which is why teachers should instruct children to be planful when they read. Good comprehension instruction should incorporate not only decoding (see Reading Decoding Strategy handout) and understanding of what is read but also the systematic planful approach to comprehending what is read.

When students encounter difficult text the consistent use of multiple comprehension strategies is essential for good comprehension (Pressley & Woloshyn, 1995). Students who are taught to be planful in reading are more successful. Teachers should make the strategies and mental processes for good comprehension explicit in their instruction by thinking aloud to the students when they teach and model strategy use. The key is teaching students a variety of strategies and encouraging them to use all of them when appropriate (which includes teaching *when* a strategy is appropriate). This will be very important for all children but especially those who are poor in planning (see Naglieri & Gottling, 1995; Naglieri, 1999).

Strategies

The following strategies can be easily taught and may be very helpful for the reader who is struggling with comprehension, especially those with poor planning scores on the CAS:

- *React* to text, by relating ideas in text to prior knowledge. This can be achieved by encouraging students to activate background knowledge related to text.
- *Predict* upcoming content by relating prior knowledge to ideas already encountered in text. This includes teaching students to check whether the predictions they made were consistent with text content.
- *Construct images* representing the ideas in text.
- *Slow down*, reading more carefully, and check back in text when unsure.
- *Generating questions* in reaction to text, perhaps by using specific question-asking methods, with the answers then pursued by reading groups.
- *Summarization*, including construction of notes capturing the important ideas in a text (see Summarization Strategy for Improving Comprehension).

Appendix 2. (continued)

The Teacher's Role

The teacher's role in strategy use includes explanation, modeling and providing feedback. Pressley and Woloshyn (1995) suggest the following teacher behaviors:

- Use strategy terms (e.g. Summarizing or Question Generation) including defining such terms when necessary.
- Model strategies by thinking aloud while applying the strategy during reading, including explaining the reasoning for applying particular strategies.
- Emphasize that strategies are coordinated with one another before, during, and after reading the text, with different strategies appropriate at different point in a text.
- Tell students the purpose of the strategy lesson (e.g., to understand stories by using the imagery strategy along with other strategies).
- Tell (discuss with?) students how they benefit from strategies use (i.e., how strategies help their comprehension), emphasizing that strategies are a means for obtaining comprehension and learning goals.

Uses

Comprehension strategies can be useful for all students. However, students having difficulty in comprehension who show deficits in planning may find the direct instruction and support of these strategies particularly helpful. Because these students may not be able to generate their own planful strategies for comprehension, they may find success when provided with specific and multiple strategies as well as an environment that suggests and supports their use.

Resources

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Appendix 3. Example of a teacher handout for learning math facts

USING PLANS TO LEARN MATH FACTS

Jack A. Naglieri
George Mason University

Eric Pickering
Ohio State University

Background Information

There are many ways to learn math facts: Some involve rote memory while others rely more on an understanding of how math works. Students are often encouraged to memorize math facts so they can be produced automatically. Sometimes they are encouraged to say or write the basic facts in order to learn them (for example, the fact 7 + 8 = 15). Writing or saying this sequence of numbers puts the task into a linear order with at least five steps as shown in the figure. Whenever a child has to learn something that is arranged in a specific linear order, the task demands considerable successive processing (using the PASS theory as a guide). If a child is poor in successive processing, then memorization of the statement 7 + 8 = 15 can be very difficult.

7	+	8	=	15
1	2	3	4	5

Memorization, however, is not the only way children can learn math facts. In order to reduce the heavy reliance on successive processing, children can be taught to use strategies (plans) for getting the correct answer. When a child uses a strategy to remember a math fact, the answer is obtained by thinking (using the plan or method) rather than by relying on remembering the string of numbers and signs (successive processing). For example, if a child is taught the "Doubles Plus One" rule, then the answer can be obtained by using this strategy as follows: "7 + 8 … well, 7 + 7 is 14, so 7 + 8 has to be one more than 14, so the answer is 15." Alternatively, the child may reason: "7 + 8 is the same as 7 + 7 + 1 so the answer is 14 +1, which is 15." This strategy changes the cognitive processing demands of the task from one that relies on successive processing to one that involves planning. Children who are poor in successive processing and who have problems memorizing math facts should be taught to use strategies like the illustrations that follow.

Strategies for Multiplication and Division

Multiplication by:

0s – 0 x any number is always 0 (0 x 9 = 0).

1s – 1 x any number is always that number (1 x 7 = 7).

2s – 2 x a number will end in a zero or an even number (0, 2, 4, 6, or 8).

5s – 5 x any number, the answer must end in 0 or 5.

- 5 x any number involves counting by fives, as when telling time from a standard clock.
- 5 x an even number is half that number with a 0 added (4 x 5 = 20, 5 x 8 = 40).

6s – 6 x any number is half that number in front of the 6, so 6 x 8 = 48. Half of 8 = 4 (which goes in the tens place with the 8 in the 1s place) and remember the answer must be even.

9s - 9 x any number can be solved by a plan: take one away from the multiplier and then add a number to make 9, those two numbers are the answer. For example, for 9 x 8, take 1 from 8 = 7, 7 – 9 = 2, those two numbers (7 and 2 or 72) make the answer.

- 9 x any number is that number times 10 minus the number (9 x 7 is 10 x 7 = 70 then 70 – 7 = 63). Of course the 10s rules are best to have mastered before this one.

Appendix 3. (continued)

- 9 x any number, adding the digits of the answer equals 9 (9 x 4 = 45, 4 + 5 = 9).

10s – The answer will end in 0.
Simply put a 0 on the end of the multiplier.

Remaining Multiplication Facts

After learning all the above multiplication rules, only the following facts must be specifically memorized: 3 x 3; 3 x 4; 3 x 6; 3 x 7; 3 x 8; 4 x 4; 4 x 7; 4 x 8; 6 x 7; 7 x 7; 7 x 8; 8 x 8.

Division

2s – The answer must be an even number, ending in 2, 4, 6, 8, or 0.
3s - The sum of the digits of the number must be divisible by 3.
4s - The number must be even and the last two digits of the number are divisible by 4.
5s - The number must end in 0 or 5.
6s - The answer must be even and the sum of its digits must be divisible by 3.
7s - You must be able to drop the 1s' digit, and subtract 2 times the 1s' digit from the remaining number. If that number can be divided by 7, the original number can be, too.
8s - The number formed by the last three digits of the number can be divided by 8.
9s - The sum of the digits must be divisible by 9.
10s - The number must end in 0.
11s - First add the alternate digits, beginning with the first digit. Next you must add the alternate digits, beginning with the second. Subtract the smaller sum from the larger. If the difference is divisible by 11, the original number is divisible by 11.
12s - The number must be divisible by both 3 and 4.

Teacher Guidelines

- Use direct explanation: teach why, when, and where to use these rules
- Model skills: talk through examples, showing how the skill is applied
- Provide practice with feedback
- Phase out teacher direction and phase in student use throughout instruction
- After these rules have been learned post them in the classroom for independent use

When To Use This Technique

Students who have a successive processing weakness may have a particularly difficult time committing math facts to memory. This technique may be used to help the students approach multiplication and division in a different strategic way that is specific and engaging. Because the method teaches a plan, it may also be useful for children who are poor in planning.

Resources

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Best Practices in Program Planning for Children Who Are Deaf and Hard-of-Hearing

Jennifer A. Lukomski
Rochester Institute of Technology

OVERVIEW

In the last 20 years educational programming of students who are Deaf (a capital "D" will be used for "Deaf" to acknowledge the cultural perspective of deafness) and hard-of-hearing has shifted from the residential schools to the public schools (Schildroth & Hotto, 1996). With this shift in educating Deaf and hard-of-hearing students in the public school system, more school psychologists are faced with the challenges of providing services to students who have a hearing loss. The complexity of the educational programming for Deaf students is daunting because it involves the interaction of academic, linguistic, social, and cultural issues. The primary task for school psychologists is how to make Deaf and hard-of-hearing students' educational programming in the public school system the most appropriate and the least restrictive.

This chapter is written for school psychologists who have limited knowledge in working with children who are Deaf or hard-of-hearing. Although the focus of the chapter is on the practical elements to consider when planning the educational programming of Deaf students who use sign language and who rely on interpreters for communication, planning issues for students who are oral are also addressed. These issues pertain to Deaf or hard-of-hearing students in partial programs, fully integrated programs, or a separate program within the regular school system. Although assessment concerns will be mentioned, this chapter is not an in-depth focus on assessment issues.

BASIC CONSIDERATIONS

Specialized Training

The fundamental consideration regarding the best practices for providing services for Deaf learners is to know one's limitations. Sign language proficiency and specialized training in the area of school psychology and deafness are necessary in order to work with Deaf and hard-of-hearing students. The current law and professional standards stipulate that students must be assessed by using their native language or primary mode of communication unless it is clearly not feasible to do so (e.g., Individuals with Disabilities Education Act Revisions of 1997: Section 3.4.4.1, NASP Standards for the Provision of School Psychological Services, 1997). Often for Deaf learners that native language is American Sign Language (ASL). Unfortunately, a majority of school psychologists reported that when assessing Deaf and hard-of hearing students they had no specialized training in deafness and either no, or poor, sign language skills (Weaver & Bradley-Johnson ,1993). One solution to this ethical and legal mandate is to use a certified sign language interpreter when providing psychological services to a Deaf learner. The use of interpreters, however, may result in misinterpretations or misunderstandings in communication (Raifman & Vernon, 1996). Another solution to this dilemma is contacting the psychologist at a Deaf residential school system in the state. Often psychologists at the residential schools are able to provide information and direction in the psychological and educational aspects of deafness.

Heterogeneous Nature

Another basic consideration regarding the educational programming of Deaf and hard-of hearing students is understanding the heterogeneous nature of the Deaf and hard-of-hearing population. The Deaf and hard-of-hearing population is as diverse as the hearing population in regards to gender, religion, ethnicity, home languages spoken, and sexual identity. In addition, within the Deaf and hard-of-hearing population there is considerable range and diversity of hearing loss type, etiology of deafness, and degree of hearing loss. Other factors such as when the child was identified with a hearing loss, when the loss actually occurred, the child's early language intervention background, the family's hearing status and communication modes, the child's cultural identification, the child's language development, whether the child's hearing is progressive or stable, the child's use of speech, cued speech and/or sign language, and the child's use of hearing aids and/or cochlear implant contribute to the uniqueness of each Deaf and hard-of-hearing child. Those variables need to be thoroughly assessed and taken into account when planning the child's educational programming. Furthermore, a sensory deficit such as a hearing loss does not mean that the Deaf or hard-of-hearing child may not be gifted, have a learning disability, or have mental retardation. With so many factors to consider when working with a Deaf and hard-of-hearing child the "individual" in Individualized Education Plan is bold.

Cultural Considerations

A third consideration is that Deafness is often viewed as a distinct culture rather than as a disability (Padden, 1980). This cultural identification of the child is not based on degree of hearing loss but rather on ASL fluency and with interaction with the Deaf community. For many Deaf and hard-of-hearing children the residential school is the place where they develop their cultural identity. For students who have minimal contact with other Deaf individuals this identification may not happen until later in life. Often this identity may not fully be initiated until adolescence (that is, depending on the student's family and educational background) and exposure to other deaf individuals (Calderon & Greenberg, 2000).

Sensitivity to these cultural differences is essential for correct interpretation of the Deaf and hard-of-hearing child's behaviors. Deaf children's behavioral norms are often dictated by their communication mode. Some of these behavioral examples are vigorous waving of one's hand to get a person's attention, scanning the classroom periodically to see who is talking, use of peripheral vision to alert to the environment, maintaining intense and continual eye contact, touching to gain attention, or use of animated and affect-laden sign. These behaviors, the norm for children who are Deaf or hard-of-hearing, when misinterpreted can lead to misidentification of behavioral disorders in Deaf and hard-of-hearing children (Morgan & Vernon, 1994).

Collaboration With Family

The importance of considering the cultural perspective of deafness highlights another important consideration regarding educational programming of Deaf and hard-of-hearing children: that is, collaboration with the Deaf or hard-of-hearing student's parents as well as the student. The majority of Deaf and hard-of-hearing children are born to hearing parents. Often these hearing parents have limited knowledge about deafness, about the Deaf culture, and about the language and educational options available for their child. Complicating matters is that in the midst of hearing parents' grief regarding having a child with a hearing loss they may hear conflicting opinions about the most appropriate and effective communication and educational method for their Deaf child. Researchers and experts in the field agree that early childhood identification and early intensive language intervention is critical (Downs & Yoshinaga-Itano, 1999). However, debated speech topics include whether a child should have a cochlear implant, be educated in an oral setting, learn ASL, and/or use cued speech. Parents need information and professionals need to collaborate with parents in evaluating the options for the child as a unique learner.

Deaf and hard-of hearing children are also integral members of the educational programming team. For example, a school psychologist who had limited knowledge about working with Deaf and hard-of-hearing students consulted with me regarding a 17-year-old "hearing impaired" student on her caseload. She had not yet met with the student and asked me for some direction planning his transition services. She added that this student was the only Deaf student in the school building. She reported that she was worried that the adolescent was too dependent on "his" interpreter and she was thinking about recommending that the interpreter be phased out of the student's educational programming. She added that the student was passing all his classes and that he had been accepted at a local college. Although she reported no behavioral concerns or adaptation issues, she was worried about how he was managing his daily living skills and how he would manage at college. She was surprised to hear that most Deaf and hard-of-hearing individuals manage daily life demands as independently as hearing individuals. For instance, they drive cars, use TDDs or the state relay system for phone communication, have flashing doorbells, and may use flashing or vibrating alarm clocks. On the basis of the information she provided, I recommended that she contact the student and have a frank discussion with him about his life plans and goals. Linking him up with Vocational Rehabilitation Services may be one of the transition services with which she could assist him. Regarding her thoughts to phase out the interpreter, I explained that removing the interpreter, thereby removing the student's access to language and communication, would be like taking away someone's glasses because that student was successful in class work while wearing glasses.

The main point of this story is that the children/adolescents and families often have information that will help with the planning of the student's educational programming. Problems encountered are compounded by a lack of comfort on the part of both the school personnel and the family/student in dealing with deafness either by ignoring problems or by minimizing the differences (Foster & Holcomb, 1990). To maximize solutions and to encourage a productive learning environment there must be open communication and information sharing. These are essential components in the educational programming for the Deaf and hard-of-hearing student.

Assessment Issues

A critical element in the design and selection of the educational programming for a Deaf and hard-of-hearing student is a thorough and ongoing assessment of the student's learning strengths and weaknesses. The components of this assessment depend on the current academic, social, and emotional development of the student. As for most students, testing is not sufficient for educational planning of the Deaf and hard-of-hearing student. Rather, a problem-solving multiple assessment approach that documents norm-referenced test results, interviews, direct observations, and analyses of informal assessment tasks is the starting framework for a comprehensive assessment. Owing to the limitations of most of the current test instruments for use with Deaf and hard-of-hearing students, the examiner needs to be sensitive and knowledgeable regarding the interpretation and integration of both the quantitative and qualitative information the student provides. Specifically, the areas that need to be addressed in a psychoeducational assessment of Deaf and hard-of-hearing students are the developmental history and educational background of the student, language background, classroom interactions and behaviors, work samples, and teacher and parent perspective of the child's adaptive behavior skills. Whether the child is a Deaf child fluent in ASL or a hard-of-hearing child who is oral or a child with a hearing loss who has limited language fluency, a section in the assessment report needs to address the child's language development. Additionally, the assessment report should specify what communication mode the examiner used to assess the child.

Owing to the language differences for the Deaf and hard-of-hearing, a verbal intelligence test is not an assessment of a Deaf and hard-of hearing student's verbal cognitive potential or problem-solving ability. Rather it is an assessment of the student's ability to *understand* verbal material. Instead of using verbal intelligence measures, the recommended practice for assessing deaf and hard-of-hearing persons' intelligence is to use nonverbal scales of intelligence, usually two different nonverbal measures (Sullivan & Vernon, 1979). A helpful document in determining the most appropriate tests to use with Deaf and hard-of-hearing students is a review of tests that Spragins and Mullen (1998) have compiled and which can be accessed on the Internet.

BEST PRACTICES IN PROGRAM

Three interconnected domains that need to be thoroughly addressed when designing the instructional programming for the student who is Deaf or hard-of-hearing are the student's communication needs, learning needs, and social interaction needs. A common theme across these three domains is the child's language development.

Communication

Communication is a process by which information is exchanged between individuals through a common system of symbols, signs, or behavior. Communication can happen on many different levels: emotionally, socially, and linguistically. When considering the appropriate learning environment for a Deaf or hard-of-hearing child, how the child communicates and the opportunities available to the child to share in communication should be examined and developed. Additionally, to determine the readiness of the student who is Deaf or hard-of hearing to participate within a specific setting, some assessment must be made of the communicative demands required of the students within the placement (Ying, 1990).

Probably the most controversial area within the communication domain for children who have a hearing loss is what is the best communication mode for a Deaf and hard-of-hearing child. Questions exist regarding whether the child and or adolescent should attend speech classes, have a cochlear implant, use a FM system, use sign language, or use cued speech. Although there is conflicting evidence in the literature and differences of opinion concerning language development and the best language method for all children with a hearing loss, experts agree that early language intervention and ongoing rich language exposure is critical (Marschark, in press). Signed and spoken language are not necessarily exclusive approaches. A combination of methods can be the most effective approach to language development. Furthermore, sign language is the most naturally accessible language to Deaf and hard-of-hearing children and for most Deaf children have a vital and valuable place in the student's life. The best practice approach is to be knowledgeable about the options and the pros and cons of each option for the specific student.

For Deaf and hard-of hearing children who are not blind, the visual field will be the student's primary sense used to orient to the environment whether he or she uses sign language or speech. This reliance on the visual field dictates that for instructional purposes, lighting and seating arrangements are of paramount importance. The classroom needs to be well lit, and glare on windows and the positioning of the teacher when lecturing in relation to the lighting needs to be examined. The student needs to be seated close to the teacher, so that the student can visually track the teacher without any visual obstructions. One of the best seating arrangements for the classroom is placing tables or seats in a horseshoe shape. When the seating arrangement is in a horseshoe, the Deaf and hard-of-hearing student can visually locate students who are participating in class discussion as well as track class activity.

Another consideration for students who rely on the visual field for communication is that the student's attention is divided among the various tasks presented in the classroom. To begin communication, the teacher first needs to gain the child's visual attention either by a tap on the student's shoulder, a hand movement in the child's visual field, or a flick of the overhead lights. Then the teacher needs to allow the child to orient visually to the teacher or object of discussion. The student has to shift visual attention from the environment to the communicator in order to receive a person's message. Often teachers present material and talk about the material at the same time. For example, teachers lecture while writing on the blackboard, or explain points during a movie. For a Deaf student this simultaneous presentation, rather than complementing the material presented, may compete with the salient information to be learned. Taking notes is another activity that for Deaf or hard-of-hearing students can become a competing rather than a supplementing task. Daily interactions in the classroom, such as rapid rate of discussion, rapid turn taking, rapid change of topics, and more than one student talking at a time, are also difficult for the student to follow (Stinson, Liu, Saur, & Long, 1996). To facilitate communication, classroom activities need to be structured in a manner that allow the student to fully participate. The best practice approach is for the teacher to limit simultaneous presentation of material, allow for pauses in presentation of activities, identify speakers, and monitor turn-taking. Depending on the student's age, a notetaker may be necessary.

Another environmental factor to consider for children who use hearing aids or cochlear implants is background noise. Many Deaf children who use hearing aids or have cochlear implants are sensitive to background noise. Any extraneous noise can be extremely distracting and the student's concentration can be affected.

SPEECH AND LANGUAGE

Owing to the heterogeneous nature of the Deaf population, Deaf and hard-of-hearing students vary considerably with respect to hearing and communication skills. The documentation that a child has a hearing loss is the child's audiogram. Audiograms should be completed and reevaluated annually to help determine the student's amplification needs and needs for programming. However, the audiogram is a gross starting point to determine the child's communication needs. Two children with identical audiograms can have dramatically different functional hearing (Ying, 1990). Similarly children with poorer auditory skills do not necessarily have the greater degree of hearing loss (Ying, 1990). In addition, frequent ear infections affect the child's hearing, as does the stability of the child's hearing loss. For example, when the student has a progressive hearing loss, a proactive approach to the student's future communication needs should be incorporated into the educational planning, and the school psychologist has to be sensitive to the student's and family's psychological needs for coping with a progressive hearing loss.

Not only will two children with identical audiograms have different functional hearing, two children with identical audiograms will also have different family attitudes toward amplification and speech training. Speech training, not to be confused with language development, can be time-intensive and may exclude the child from other valuable learning experiences. Whether speech training is enhancing the child's education or detracting from the child's learning experiences needs to be assessed and determined in conjunction with the parent's concerns, the child's motivation, the child's age, and the child's most effective mode of communication. In general, many children with mild-to-moderate hearing losses benefit from amplification and speech training. While children with severe-to-profound hearing losses may also benefit from amplification and speech training, most often they additionally need sign language as their primary mode of input and output.

ASSISTIVE LISTENING DEVICES

There have been many advances in the technology relating to assistive listening devices (ALDs) and other communication devices. Most of the ALDs help the student make the most out of residual hearing and make speech or noises more audible, if not clearer. No device, however, restores the hearing to normal or typical hearing. The traditional ALDs are FM systems and hearing aids, which are used primarily by children who have moderate hearing losses to amplify the loudness and the clarity of the sender's voice. The FM system is used in the classroom. The teacher wears the microphone and transmitter, and the child wears the receiver. Recent technological advances in ALDs include transposers, programmable hearing aids, and cochlear implants (Copmann, 1996). Hearing aids that are programmable are devices programmed specifically to fit the user's hearing loss. Transposers are devices that change the high pitched sounds that the child cannot hear into low pitched sounds the child can hear.

In comparison, the cochlear implant is one of the newest technologies now used in "treating" children with a sensorineural hearing loss. Considered a more invasive ADL, the cochlear implant has seven components. A receiver is surgically implanted under the skin near one ear and fine electrode wires are inserted into the cochlea. Additionally the child wears a microphone at ear level that picks up sound signals. These signals are then processed into appropriate electrical signal that travels by a cable to a radio frequency transmitter that is placed on top of the area of the skull where the receiver has been implanted. The receiver then delivers the electrical signal to the afferent auditory nerves within the cochlea.

The controversy revolving around the cochlear implant stems primarily from professionals and members of the Deaf community who view deafness as a rich culture with its own language. In contrast, cochlear implants are perceived as representing a medical perspective of deafness, implying that deafness is a deficit that needs to be fixed. In addition to being seen as a threat to the vitality of Deaf culture, another concern pertaining to cochlear implants is that medical professionals appear to be recommending to parents that they have their child implanted without providing deliberation of the ramifications, complications, and realistic outcomes.

Recent studies have shown that children with cochlear implants have continued improvement in speech perception and production as long as 4 years postimplant (Brookhouser, Beauchaine, & Osberger, 1999). Cochlear implants, however, do not restore hearing to normal nor are there reliable factors that accurately predict which children will benefit most from implantation (Epstein, 1996). Furthermore, the auditory and speech rehabilitation is extensive, requiring that the child and family be highly motivated for the child to learn how to make sense out of the sounds the child is hearing.

For a school psychologist working with a Deaf child whose parents are considering a cochlear implant, it is important to stress to the parents the need for a preoperative psychological evaluation to thoroughly examine the motivation and expectations as well as extensive rehabilitative efforts required of this treatment (Pollard, 1996). As more children with cochlear implants enter the schools, school psychologists will need to be aware that these children need extensive auditory and speech training. And perhaps most important, owing to the visible nature of these cochlear implants, children with cochlear implants may also need special support in coping with ridicule from other hearing children and Deaf children.

Other assistive technology that can be used to accommodate students with hearing losses are telecommunication devices (i.e., TDD, TTY), captioned films and media materials, and computers. The TTY is a device that is hooked up to the telephone so that the student can communicate with other TTY users or communicate via the relay system with hearing individuals. Deaf and hard-of-hearing students need to have access to a TTY in the school and be encouraged to use the TTY rather than rely on others to make phone calls for them. For example, if the student's hearing aid is broken, the student can learn how to advocate for himself or herself by learning how to contact the hearing aid center and request repair services.

Another more omnipresent technological device that can be used for instruction as well as to facilitate communication and interaction among students is the computer. The computer is a more sophisticated form of the pencil and pad method of communication. This method of communication presupposes that students have minimum literacy level and keyboard skills. Both these skills can, however, be further developed as students communicate via the computer.

CUED SPEECH

Cued speech is a visual representation of English that can help a child who is Deaf become aware of speech sounds. Different hand shapes that represent sounds or phonemes are positioned around the speaker's mouth while the speaker talks. Cued speech stems from an oral approach to language, and the hand shapes support spoken language making sounds that look alike on the lips in English more distinguishable to lip-read. Research, primarily in Europe, found that deaf children who used cued speech consistently at home and at school from an early age showed increased performance in reading skills (Marschark, in press). Parents and educators, therefore, need to at least consider the possible incorporation of cued speech as a supplemental support system to help the child in learning phonetics and reading subskills.

AMERICAN SIGN LANGUAGE (SIGN LANGUAGE SYSTEMS)

For children with severe to profound hearing losses, exposure to spoken language usually is not sufficient for successful communication. For these Deaf students, communication has to depend on visual cues (Marschark, in press). ASL or other forms of manually coded English provide an effective means of communication. ASL is a natural language that has its own grammar and rules of syntax. In contrast, other manually coded sign languages use hands to convey language rather than voice, yet are artificial signing systems that adopt and adapt ASL signs to fit the grammatical structure of English. The degree these signing systems adhere to the grammatical structure of English lies on a continuum with Pidgin Sign English (PSE) on the end of most flexible in use of ASL structure as well as English word order. On the other end of the continuum are more rigid manually coded systems such as Signed Exact English (SEE1, SEE2). Total Communication—using a combination of methods to communicate to the child—is effective for facilitating communication; however, it is not a real language and does not develop a language base for the child.

Considering the varied language enrichment backgrounds of Deaf and hard-of-hearing children the assumption that Deaf children will automatically learn and become fluent in ASL is optimistic. Interaction with ASL Deaf role models facilitates the learning of ASL. Nonetheless, many Deaf children who have limited exposure to Deaf role models at early ages would benefit from formal instruction in ASL to enhance their communication skills.

INTERPRETERS

For those students whose preferred mode of communication is sign language, an educational interpreter should be provided to facilitate communication for the Deaf student. Often the function of the educational interpreter in the public school system is not clearly defined, and school personnel have misunderstandings regarding the role of the interpreter and who can interpret. The mere ability to sign does not qualify one to be an interpreter. Especially in a formal setting where an interpreter is the voice for the teacher, the interpreter must have specialized training and be certified by the state or the national Registry of Interpreters for the Deaf . Additionally, the interpreter must not only be a certified interpreter, but also qualified to interpret in the sign language form used by the child. Another misunderstanding regarding the role of the interpreter pertains to when the interpreter's support is no longer needed. That a Deaf student demonstrates success in the classroom does not mean that the student no longer needs the interpreter. One of the reasons why the student is successful is because the interpreter facilitates communication. If the interpreter is removed, than the student no longer has the access to communication.

The other roles an educational interpreter may assume must be clearly defined with all members of the educational team. First, and foremost, the interpreter is a facilitator of communication in class and out of class (i.e., extracurricular activities). In the school setting, educational interpreters are also members of the educational team. Educational interpreters can assume other responsibilities if they have the qualifications, background, and time. School psychologists, understanding that some teachers may believe that the interpreter is either an interruption or a glorified teacher's aide, can facilitate the team's discussing these obstacles and clarifying roles.

When a classroom uses an interpreter, a few unique communication dynamics occur. The lag time between the spoken and signed message affects the ability of the Deaf student to fully participate in classroom discussion. Teachers, therefore, need to allow extra time before calling on students, to allow for the Deaf student to catch up. Sometimes the interpreter may also need extra time to provide explanations and define terms.

Learning Issues

Educators are often concerned that deaf and hard-of-hearing learners are not achieving to the level of their potential, especially in reading and writing. Overall, Deaf and hard-of-hearing individuals have average intellectual abilities; however, their academic achievement often falls below average. Many Deaf students leave high school reading on a third- or fourth-grade level. Specifically many Deaf and hard-of-hearing students have a low reading vocabulary, limited background knowledge/experience, poor English syntax, weak processing ability, difficulty understanding figurative language, and problems with inferencing skills (Paul & Quigly, 1994). No doubt the development of literacy skills needs to be the focus of education planning for Deaf and hard-of-hearing students, especially in the elementary years.

The area that has to be first considered in developing these literacy skills is the student's language development. Many Deaf and hard-of-hearing students are challenged to learn to read when they have not yet acquired and internalized any formal language (McAnally, Rose, & Quigley, 1994). This delay in language is partly due to delays in diagnosis of the hearing loss and lack of exposure to early enriched language experiences, pointing to the importance of early hearing loss diagnosis and language intervention. Owing to the critical aspects of having a foundation in language before learning to read, Deaf and hard-of-hearing students need a thorough language assessment. This language assessment may include both an assessment of the child's ASL development as well as the child's English development. It is recommended that an interactionist approach to a comprehensive language assessment for Deaf and hard-of-hearing children be used that focuses on identifying the strategies the student is using to accomplish certain language tasks and to evaluate the success of these strategies (Yoshinaga-Itano, 1997). Developmental profiles then can be created and information can be evaluated concerning the context in which the language is used.

It is possible for deaf students with profound hearing losses to achieve reading skills commensurate with those of their hearing peers. Although Deaf children of deaf parents tend to read better than most Deaf and hard-of-hearing children of hearing parents, many Deaf children of hearing parents who learn to sign also have reading abilities that are higher (Marschark, in press). The crucial issue is that children who have access to language at home and have more language experiences have an increased proficiency and automaticity in processing meaning from the written word (Bebko & Metcalfe-Haggert, 1997).

A concern has been raised that reading instruction for Deaf students focuses on teaching them the basic decoding skills of how to read, without encouraging active participation or teaching individual strategies for reading to learn for comprehension (Strassman, 1997). Deaf students greatly benefit from instruction in metacognition about reading (Strassman, 1997). Instruction that focuses on basic skills such as using worksheets, answering teachers questions, or memorizing vocabulary words without developing metacognitive knowledge of reading for meaning and authentic purposes is not effective. Additionally, strategies that encourage attention to text elements as well as relations among those elements are most effective in optimizing text comprehension (Marschark & Lukomski, in press).

Making implicit the connections and relationships between words in the text as well as across experiences should be an instructional goal. Teachers can select stimuli for exposure, control environmental events, and focus the child regarding salient aspects of the task. A qualitative interactive feedback format or mediated learning experience is recommended to be used with Deaf and hard-of-hearing students (Das & Ojile, 1995).

Another instructional approach is to use existing resources that are used with children who have difficulty with reading, such as strategies borrowed from the learning disability field (Marschark & Lukomski, in press). This is not to suggest that these children should be labeled or diagnosed with a learning disability, but rather that there are teaching methods available in the learning disability domain that can be successfully applied with Deaf and hard-of-hearing learners. Many strategies used with children who have reading disabilities involve interactive and direct instruction, emphasize pictorial materials, and use repetition and incorporate multi-sensory information sources, all of which enhance the learning experience for Deaf and hard-of-hearing children.

Parents also should be advised concerning the importance of reading with their young children and instructed on methods by which they can combine sign language and spoken language or sign-supported spoken language. Early reading experience can directly facilitate language development and literacy in children with hearing loss, as well as provide a structured interaction between a child and the parent.

Another component to interactive learning is teaching the student about his or her hearing loss. Similar to children who have learning disabilities, Deaf and hard-of-hearing students need to be taught about their hearing loss and how it affects learning and the strategies needed to compensate for the differences. This understanding of learning style, strengths, and weaknesses allows the student to become a self-advocate. Many Deaf and hard-of-hearing college-age students remember being tested by the school psychologist. In comparison, few are able to explain the results of the testing, know how to read their own audiogram, or understand what learning strategies work for them. Informing students about their strengths and weaknesses is significant in empowering students, thereby enhancing their self-esteem and motivating them to become more active in the learning process.

Social Interaction

Informing students about the impact that their hearing loss has on their learning is one component in helping students to have clearer perceptions of their hearing loss. Another component that influences students' perceptions of their hearing loss is the students' interaction with family members, peers, and others.

The proponents of mainstreaming believe that proximity to hearing children will actually promote social interaction. Unfortunately, owing to the language constraints for Deaf and hard-of-hearing children, this social interaction happens infrequently. Furthermore, many Deaf and hard-of-hearing students have limited contact with other Deaf children because often only one or two students in a school or school district may be Deaf. Coping with hearing loss in the mainstream becomes more stressful without the variety of social interaction that can help combat some of the stress.

School psychologists know how important friends are for mental health and overall adjustment. Additionally, students with positive social interactions in school tend to have higher academic achievement and are more likely to succeed in their careers (Marschark, 1997). The lack of close friendships for Deaf and hard-of-hearing students in the mainstream setting has critical implications for program planning for their development. Program planning should include their feelings of isolation and loneliness that may increase through the school years as peer influences increase. Considering the significance of social interaction, children may do best with an educational plan that recommends or supports different placements at different times during their development. Some children benefit from attending a separate program designed for Deaf children part of the day in addition to mainstream classes for identified courses.

Social interaction, however, is not just about having friends, socializing at school, and minimization of isolation or belonging to a group. Social settings provide rich learning opportunities for language development and also for incidental learning that illuminates the aspects of daily life (Yoshinago-Itano, 1997).

There is considerable overlap between communication, language, and social interaction. A shared language does not necessarily guarantee good communication; however, without a shared language limited communication can happen, and without social interaction language development is hampered. Social interaction activities such as teaching others sign language and teaching Deaf and hard-of-hearing children how to ask questions, take turns, and listen should be planned in the child's educational program. For the most part, small group activities are better than large social groups; dyad cooperative exercises are the best for an equal interaction to take place.

To foster and promote the Deaf and hard-of-hearing child's social emotional development, home-school collaboration is also critical. As with other disabilities, the family's coping and adjustment to the hearing loss often is a good predictor of the student's adjustment. Some suggestions are to involve parents in the education process and to provide them with resources regarding advanced sign language classes, family weekend retreats, exposure to deaf adults, and problem-solving groups to address deaf adolescent issues (Calderon & Greenberg, 2000). The importance of providing Deaf and hard-of-hearing children opportunities to learn about cultural aspects of deafness and socialize with other Deaf and hard-of-hearing students and adults needs to be brought to the attention of the child's family.

SUMMARY

School psychologists who are sensitive to the complex and interconnected nature of the communication, literacy, and socialization issues related to hearing loss can play a vital role in the planning of a Deaf and hard-of-hearing student's educational programs. A dominant theme and focus must be the child's language development. Early language intervention is a key element in the planning of the child's educational programming. In the role of consultant, school psychologists can facilitate collaboration among the regular education teacher, special education teacher, interpreter, speech and language specialist, and family. Especially in the domain of socialization, which pertains primarily to the socioemotional well-being of the child, it is necessary for school psychologists to be proactive in advocating for the child's welfare.

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The second edition of this book is a comprehensive review of the most recent research in the areas of mental health, cochlear implants, assessment and educational placement issues, support services such as interpreting and captioning, the impact of technology in development and education, language development, alternative communication methods, and cutting-edge treatment of literacy issues.

National Institute on Deafness and Other Communication Disorders (NIDCD), Bethesda, MD 20992-3456. (1-800-241-1044 or www.nih.gov/nidcd)

The clearinghouse is a resource for health information on hearing, balance, smell, taste, voice, speech, and language. The section on hearing and balance includes information and materials on American Sign Language, cochlear implants, captioning, and links to other helpful sites such as the National Association of the Deaf and the Alexander Graham Bell Society.

Ramsey, C.L. (1997). *Deaf children in public schools.* Washington, DC: Gallaudet University Press.

This book addresses the theoretical and strategic questions of the educational programs for Deaf and hard-of-hearing students in public schools. The author shares her extensive sociolinguistic data on classroom contexts and language use in an elementary school mainstreaming program for deaf children.

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This is a good reference book with its diverse selection of chapters written by professionals of different backgrounds regarding Deaf and hard-of-hearing children education. For example, chapters included cover the audiological evaluation, speech and language assessment, psychoeducational assessment, developing an IEP, managing classroom amplification, and communication and behavior management issues.

Schwartz, S. (1996). *Choices in deafness: A parents guide to communication options.* Bethesda, MD: Woodbine House.

An overview of the range of communication choices available to Deaf and hard-of-hearing children. Chapter selections range from cochlear implants, oral approach, cued speech, and a total communication approach. Each section includes a brief overview of the communication mode followed by testimonials of Deaf and hard-of-hearing individuals who have made the choice.

Spragins, A., & Mullen, Y. (1998). Reviews of four types of assessment instruments used with Deaf and hard-of-hearing students [On-line]. Available from: http://www.gallaudet.edu/~catraxle/reviews.html.

The four categories of cognitive assessment, adaptive behavior and social emotional assessment, developmental/criterion-based scales, and academic/readiness assessment are reviewed. The specific instruments advantages and disadvantages for use with Deaf and hard-of-hearing students are outlined. Recommendations for use with Deaf students are presented.

87

Best Practices in Planning Effective Instruction for Students Who Are Visually Impaired or Blind

Sharon Bradley-Johnson
Sandra K. Morgan
Central Michigan University

OVERVIEW

Students whose visual loss, even with corrective lenses, interferes with educational performance are eligible for special education services under the category of visual impairment. This group of students is a very heterogeneous group because of differences in the severity and type of loss, environmental factors, and whether or not there are additional impairments. Few students with a visual impairment are totally blind. Most, even those classified as legally blind, are able to perceive light and see details to some extent.

The classification *legally blind* makes one eligible for government benefits. Individuals who are classified as *legally blind* have a visual acuity of 20/200 or less in the better eye with correction or a restricted visual field with a diameter of no more than 20 degrees. Visual acuity describes distance vision measured on a standard eye chart, where 20 indicates the distance at which vision is measured and 200 the distance at which someone with normal vision could identify the largest symbol on the eye chart. The restricted visual field refers to the amount of visual field one uses to view something from the side. The amount is described in degrees and typically the visual field extends to 180 degrees (Sacks, 1998). The definition of *legally blind* is of little help in educational planning because often these students can use visual material (Scholl, 1985). For clarity in this chapter, the term *blind* will be used to refer to students who must use senses other than vision for learning in the classroom.

Students who are blind will need tactile and auditory input for instruction. They require special equipment and materials such as computer hardware and software with speech or Braille output, talking calculators, recorded material, or raised-line paper for writing. For eligibility for special education services, these students would be classified as *visually impaired*. *Visually impaired* refers to students whose visual loss, even when corrected, interferes with their educational performance.

Other students classified as visually impaired, but who are not blind, include those needing more than glasses to function well in the classroom. The classification of visual impairment used in schools includes students with *low vision.* These students have severe vision losses even after correction, and their vision is improved by the use of vision aids, changes in the environment, and use of other procedures (Corn, 1983). Examples of low vision equipment include book stands, magnifiers, and closed circuit television (CCTV) where text is magnified electronically and displayed on a monitor. Some students classified as visually impaired may require large type, whereas others may be able to read regular-size type. Even though some students have sufficient vision for reading, they may require tactile and auditory material for instruction. Thus, students classified as visually impaired are a very diverse group requiring many different types of adaptations to enable them to function well in the classroom setting.

Incidence

A report from the National Plan for Training Personnel to Serve Children with Blindness and Low Vision

(NPTP), a project funded by the U.S. Department of Education's Office of Special Education Programs, estimated the number of students with visual impairments who received special education services in 1998 (Kirchner & Diament, 1999). The estimate for students between birth and 21 years of age was 93,600. These students consisted of 32,700 (35%) whose only impairment was vision; 50,100 (53%) who had at least one additional impairment other than deafness; and 10,800 (12%) who were deaf-blind. These data support the fact that many students with a severe vision loss also have additional impairments.

The American Printing House for the Blind (APH) annually compiles a registry of legally blind individuals. Estimates by the NPTP were somewhat more than double the number of students reported in the census completed a few years before for APH. This was not surprising, however, because the NPTP study was based on the functional definition of visual impairment used in schools to determine eligibility for special education services, whereas the APH census is based on individuals classified as legally blind.

Etiology

The many types and degrees of vision loss are a result of numerous etiologies. Most visual losses are congenital for school-age students (Scholl, 1985). Congenital losses may be a result of inheritance, genetic malformation, or prenatal damage. Acquired vision losses can result from factors such as anoxia at birth, head injury, infection of the central nervous system (e.g., meningitis), or reactions to medications.

Examples of congenital losses include albinism and retinitis pigmentosa. Albinism involves partial or total lack of pigment and results in abnormal development of the optic nerve. Classroom adaptations needed for this condition may include sunglasses, magnification, holding objects and materials close, and special lighting. Retinitis pigmentosa involves degeneration mainly of light-sensitive cells in the retina, sometimes resulting in total blindness. Adaptations required may include use of closed-circuit television, special lighting, and avoidance of glare.

Examples of acquired vision losses include retrolental fibroplasia and retinal detachment. Retrolental fibroplasia can be caused by factors such as low birth weight or early gestational age. Adaptations might include telescopes to see material at a distance, magnifiers for desk work, high illumination, and closed-circuit television. Retinal detachment can occur as a result of factors such as diabetes or trauma to the head. Adaptations needed are similar to those used for retrolental fibroplasia.

Consultation with a student's medical specialist, teacher, and the consultant for students who are visually impaired should be helpful in understanding a particular student's condition. A multidisciplinary approach is essential in order to work effectively with these students.

Onset and Progression

Age at onset of the vision loss has implications for instruction. When the onset is after 5 years of age, children typically retain visual memories such as memories for color and visual images. These memories facilitate acquisition of language concepts and other skills. For example, learning the meaning of words such as *mountain, castle,* or *fish* for sighted children usually is largely dependent on visual input. However, children who have a severe loss of vision prior to age 5 must depend on verbal explanations and definitions to understand such words. This reliance on verbal explanations may make it more difficult for those students to acquire a thorough understanding of such concepts. Furthermore, some students with a vision loss may use certain concepts correctly in their speech, but do so only because they have learned the concepts by rote. It is wise to probe any questionable responses to ensure that students with a vision loss have an adequate understanding of concepts they use.

Whether the onset of the loss of vision is gradual or sudden also has implications for instruction. When the loss is gradual, it is important to teach as much information requiring vision as possible while a student is still able to use visual input. In either case, students and their families are likely to benefit from support and counseling to help cope with this dramatic change in their lives. Those whose vision loss leaves them with little usable vision will need to adapt to the use of tactile and auditory input for instruction and, in many cases, to a new mode for written expression. Counseling or therapy may be needed to help students and their families understand the student's vision loss, comprehend what adaptations can be made, and address their fears.

BASIC CONSIDERATIONS

Multidisciplinary by Necessity

In nearly all cases it is impossible to plan a comprehensive, effective instructional program for a student who is visually impaired without using a multidisciplinary approach. In addition to parents and teachers, school psychologists must work with consultants certified in working with students who are visually impaired, medical specialists, and orientation and mobility instructors.

Consultants certified in working with students who are visually impaired or blind may carry out a functional vision assessment, the results of which have important implications for classroom instruction. How a particular student uses his or her vision when performing various academic and daily living tasks is assessed. Utley, Roman, and Nelson (1998) cited the example of a student with monocular dominance who might need to turn his or her head, or position himself or herself off center from a task to engage useful vision. Uninformed members of a multidisciplinary team might choose the mid-line position as best for viewing the task because they lack an understanding of the effects of vision loss on learning. A consultant certified in this area, however, would be able to conduct an assessment taking into consideration the student's type of vision loss and factors such as position, lighting, contrast, and glare. On the basis of these results the consultant could make recommendations for positioning and environmental modifications to enhance visual efficiency. Reports from functional vision assessments can include information regarding appropriate illumination, viewing distance for materials, type of media for reading and writing, size of type, and low-vision equipment. Functional vision assessments are carried out with students ranging in age from infancy through adolescence.

Reviewing medical reports is critical to understanding a student's loss of vision. Ophthalmologists' and optometrists' reports will include a description of medical interventions needed, prescriptions, prognosis of progression, and any required restrictions on eye use.

Reading a medical report can be a daunting task because of the terminology and abbreviations. Commonly used abbreviations and their meaning appear in Table 1.

Information in a medical report includes a description of visual acuity measured separately for each eye. In addition, acuity will be measured with and without correction, that is, with and without glasses. Typically such information is given for both near-vision and distance viewing.Because vision conditions change frequently, resulting in changes in the needs of students, it is important that vision assessments are current (i.e., no more than a year old). Not only should vision assessments be current, but hearing reports also should be up to date. Students who are visually impaired or blind rely so heavily on what they hear that it is important to ensure that hearing ability is maximized.

Table 1. Commonly used medical abbreviations

C.C.	With correction.
C.F.	Counts fingers. If unable to read letters on the eye chart, vision may be measured by the ability to count fingers held up at varying distances.
H.M.	Hand movement. If unable to read letters on the eye chart or count fingers, vision may be measured by the ability to see hand movement at varying distances.
L.P.	Light perception
N.L.P.	No light perception (totally blind)
N.V.	Near vision
O.D.	Ocular dexter (right eye)
O.S.	Ocular sinister (left eye)
O.U.	Oculi unitis (both eyes)
P.P.	Near point
P.R.	Far point
S., S.S., or S.C.	Without correction
V.A.	Visual acuity
V.F.	Visual field
W.N.L.	Within normal limits

Recommendations from a medical report, however, may not apply to the classroom context. Anxiety and the unfamiliar environment of a medical office may affect a student's use of vision during a medical examination. Thus, information from a functional vision assessment conducted within the school environment also is needed to plan instruction.

An orientation and mobility (O & M) instructor has special training in facilitating safe and independent travel for students who are visually impaired or blind. An untrained observer may think that the student moves about quite well considering the vision loss. An orientation and mobility specialist making the same observations, however, may be able to suggest several options that could increase independent functioning considerably. Thus, assessment and instructional planning by a specialist in this area is an important component of an educational program for those students. Training in orientation and mobility skills often begins as early as infancy (Leong, 1996).

An O & M assessment will include evaluation of a student's skills relevant to moving about safely, such as balance, posture, and gait, and consideration of factors in the environment in which the student travels, such as obstacles, traffic flow, and support received from others for the student's independence. An O & M instructor may teach a student directly, working on skills such as travel indoors or outdoors (including both urban and rural areas), concept development, use of a cane, low-vision equipment, electronic travel devices, and public transportation. This specialist also may work with family members and other professionals who are able to help students practice skills as well as arrange experiences where the skills will be needed (Fazzi, 1998).

Thus, school psychologists must collaborate with other professionals to develop comprehensive, effective educational programs that maximize the benefit of services provided to students who are visually impaired or blind. Work with teachers certified in this area, medical specialists, and orientation and mobility specialists is particularly important.

BEST PRACTICES

Working With Families

Adjusting to the diagnosis of a child's severe vision loss can be particularly difficult for family members who have had little or no contact with persons who are visually impaired or blind. Family members may go through various stages of grieving when first informed of the condition. Parents may be very concerned or frightened about raising a child with a severe vision loss. School psychologists can, however, do several things to help the family adjust to the diagnosis and aid in planning the child's educational program. When sharing information with students and their families, encourage conversation and provide an environment that is conducive to students asking questions. Preparing the student and family members on ways to answer others' questions about the vision loss may be helpful (Sacks & Corn, 1996).

Besides providing support and counseling, school psychologists can arrange for members of the family to talk with adults who are visually impaired or blind. These adults can share their experiences, discuss concerns the parents have, and serve as role models for the families and the child. The fact that most children who are visually impaired or blind grow up to be happy, productive adults should be emphasized. Arranging for the family to participate in parent support groups and talk with other families with children with severe vision losses can be very helpful.

Because of vision loss, certain skills may be delayed in development, especially for infants, toddlers, and preschoolers. Many of these delays amount to only a few months, and some can be lessened or eliminated with instruction. If parents are aware that certain skills may take longer to develop for these children, then they are less likely to become upset when their child does not meet a developmental milestone when sighted children do. Also, if parents are aware of these possible delays, then they can target such skills for practice that should help to minimize delays. Examples of developmental delays that may occur for children who are visually impaired or blind include play and self-help skills that require fine motor movement (scooping food is particularly difficult); walking, which appears at approximately 20 months (Scott, Jan, & Freeman, 1985); social skills (discussed later in this chapter); and some language skills including use of pronouns and recognizing one's name.

Families of children from infancy to age 5, or whose children are developmentally delayed, may find the *On the Way to Literacy* (Stratton & Wright, 1993) program helpful. This program provides a framework for interaction and helps parents teach important language concepts and early book-handling skills. A print handbook is provided for parents and 10 tactile/visual storybooks are included for reading to children. The books are in Braille and print and include tactile and visual illustrations. These materials also might be helpful for teachers who have little or no experience with children with a severe vision loss. Also, a video and brochure package, *Discovering the Magic of Reading*, is available from APH for parents and teachers of children from birth to age 5. This material addresses methods for involving children with a vision loss in a story and choosing books that are likely to be of interest to those children.

For children who will become Braille readers, family members may benefit from learning some basic information about Braille. Encouraging family members to observe their child in the classroom may help the family members better understand how their child functions in this setting and understand how they can be of help. Discussing the importance of organization (covered later in this chapter) and different learning strategies may aid parents in helping children with homework.

Families also may benefit from information regarding computer technology, including voice input/output, scanners, and Braille printers that help Braille readers share information with others.

As Chen and Dote-Kwan (1998) suggested, "The simplest way to identify what is important for the family is to ask them" (p. 318). Parents must be closely involved in educational planning for their child, and their interests and concerns must be solicited and used in planning programs. Communication with parents will be enhanced during this process if school psychologists avoid using jargon when talking with family members.

Infants, Toddlers, and Preschoolers

Studies comparing interactions of parents of sighted infants and parents of infants with visual impairments indicate that parents of infants with visual impairments may need assistance in recognizing and interpreting the signals of their infants (Chen, Friedman, & Calvello, 1990). Because infants with a severe vision loss do not make eye contact or direct their gaze toward someone speaking to them, parents may be disappointed or feel rejected when attempting to interact with their infant. The lack of eye contact results in a decrease in the frequency of parents' visual and vocal responsiveness to the child (Rogers & Puchalski, 1984).

Another factor interfering with parent-child interaction is that smiles are difficult to evoke from infants who are visually impaired. Frequently vigorous physical play is required to make these infants smile (Baird, Mayfield, & Baker, 1997). Without visual feedback, children's smiling behavior diminishes (Teplin, 1995). Thus, verbal feedback (e.g., "What a beautiful smile!") can be used to reinforce smiling.

Further, when auditory stimulation is present, infants with a visual impairment tend to decrease their movement, which parents may interpret as a lack of interest in interaction. The motor inhibition, however, is actually used as a means to attend better to the auditory stimulation (Ferrell, 1985).

Consequently, parents of young children with a severe visual impairment must make more of an effort than parents of sighted infants to evoke interaction with their infants. Often these parents need help recognizing behaviors that indicate their infant is responding to their initiations, is signaling to initiate an interaction, or is needing a break from interaction. Infants who are visually impaired have a limited number of signaling behaviors for communicating (Baird, Mayfield, & Baker, 1997), and these behaviors can be subtle or difficult to interpret. Other than eye contact and smiles, communicative behaviors can involve any fairly consistent change in behavior. Examples include quieting, squirming, changing facial expression, and other increases or decreases in activity level. Helping parents identify these responses, and modeling back-and-forth interaction with the baby, can facilitate positive interactions between these parents and their infants. Such assistance can prevent a negative pattern of interaction where the infant's signals are ignored, the parent perceives the infant as uninterested in interacting, and initiations from both parent and infant decrease.

Because some children are unable to see when someone is approaching, their parents may need guidance on how to avoid startling those children when initiating an interaction. Reminding the parent to talk as he or she approaches the child will be helpful.

Physical contact aids learning in young children, especially for those with a severe vision loss. Physical contact contributes to the development of language, social skills, cognition, and motor skills. If young children with a visual impairment learn to find physical contact pleasurable, this will help prevent the passivity and isolation that frequently characterize these children. Thus, encouraging physical contact between parents and infants or young children can be very beneficial. For infants, the use of sling carriers makes physical contact easy for parents to provide. The carriers also keep the infant in an upright position enhancing alertness and allowing the baby to be up at a level where most activities take place.

Physical contact from parents in the form of guided exploration can be helpful for several reasons. Some infants with a visual loss may be quite passive as a result of extended hospital stays where they have been restrained for medical reasons. Passivity limits learning opportunities. Also, because infants and children with little or no useful vision are not enticed by visual stimulation, this may limit exploration of the environment. Furthermore, because these children cannot visually scan their environments, without assistance from others they may be unaware of their choices and opportunities (Recchia, 1997). To familiarize children with various choices and opportunities, parents can physically guide their child to encourage movement, manipulation and exploration of objects, and search for objects that fall out of reach. Such guidance aids learning.

Whereas safety is an issue when vision is severely impaired, frequent interaction with the environment is critical to reduce passivity and enhance learning. Often these infants and young children need more opportunities to explore the environment than sighted children in order to learn. Hence, a balance needs to be found between encouraging exploration of surroundings and ensuring safety. Parents with children with a disability may tend to be overprotective and may inadvertently inhibit learning. Teaching these children to avoid hazards and to respond appropriately to "No" are critical skills to target for instruction.

Play skills may require some instruction, and provision of appropriate toys is helpful. Toys that are large and make noise are easier for children with a severe vision loss to locate. Toys that respond to simple motor movements, such as roly-poly toys, wrist rattles, or bells on booties help an infant learn that his or her behavior affects the environment. This is an important lesson, especially for a child with a physical or mental impairment.

Parents of preschoolers with a severe vision loss report that their children prefer to play with household objects, musical toys, and other noise-making objects (Troster & Brambring, 1994). Several activities to enhance orientation, play, and social skills of preschoolers with vision impairments are described in Zanandrea (1998). These activities are designed for use with groups of children including those with vision losses and their sighted peers.

Having a particular place for storing toys and other items belonging to the child, and teaching the child to put things back when finished with them, helps teach organization skills. The sooner these skills are taught to children who are visually impaired or blind the better. Developing the habit of keeping things organized will be very beneficial once children reach school age.

Because of vision loss, language development may be slower in some areas than it is for sighted children. Parents can help with language development by routinely naming objects and describing their own actions, even with infants. Providing rich verbal descriptions of children's exploration of the environment can help integrate experiences in a meaningful way (Recchia, 1997). Daily reading to the infant and young child also is important.

Encouraging parents to develop the habit of using their child's name before saying something to the child is helpful for two reasons. These children often are delayed in learning to respond to their names. Frequent use of the child's name provides needed practice in name recognition. Second, use of the child's name lets the child know that what is about to be said is directed to her or to him.

Social skills, unfortunately, are delayed for many children who are visually impaired or blind. Often these infants and young children miss nonverbal cues such as gestures, facial expressions, and eye contact. Preschoolers with vision impairments have a tendency to spend most of the time playing alone. Their difficulty in interpreting nonverbal messages may cause a breakdown in communication with peers (Erwin, 1993). Rather than making eye contact, Chen and Dote-Kwan (1998) suggested that these children tend to use physical contact, which may not be positively received by their peers. Hence, social skills often should be targeted for instruction.

Sleep problems is another area where families of young children with a severe vision loss may require assistance. Blind individuals are particularly prone to disturbances in circadian rhythms. Without visual input, circadian rhythms in body temperature, hormone levels, and alertness may not coincide with a 24-hour cycle. Sleep problems have been reported in from 34 to 80% of blind adults (Sack, Blood, Hughes, & Levy, 1998). In a study comparing blind and sighted children from 4 through 36 months of age, Mindell and DeMarco (1997) found that children who were blind had significantly more problems at bedtime and during the night. Children who were blind tended to sleep about an hour less at night because they went to bed later and were awake longer during the night. Early intervention is important as sleep problems tend to continue into later childhood (Mindell, 1993). Behavioral interventions typically used with sighted children may help children with severe vision loss (Mindell, Goldberg, & Fry, 1996). The establishment of consistent bedtime routines helps to cue the body that it is time to sleep (Ferber, 1987). Children should be awakened at a consistent time in the morning as well in order to establish a normal cycle (Weissbluth, 1982). Other behavioral strategies that have been helpful for sighted children include progressive delayed responding (Ferber, 1987) and "crying it out." The effectiveness of these procedures for children with severe visual impairments, however, has not been systematically evaluated. Espezel, Jan, O'Donnel, and Milner (1996) suggested that oral melatonin alleviates sleep disturbances in children who are visually impaired. School psychologists working with children with visual impairments can help to lessen the stress sleep problems place on families by working with parents to develop effective treatments.

School-Age Students

CLASSROOM BEHAVIOR

When planning instruction for students who are visually impaired or blind, consideration of several classes of behavior is more critical than for most sighted students. Students with a severe vision loss are likely to require more assistance from others than their sighted peers. Consequently, it is important that they are able to request help, accept help, and refuse help appropriately. If this is not the case, then these behaviors need to be taught. Some students may benefit from counseling to ensure that they are asking for help when needed.

To function efficiently, and to avoid frustrating and unnecessary searches for materials, students who are visually impaired or blind need good organizational skills. By using the *Social Skills Rating System* (Gresham & Elliott, 1990), Buhrow, Hartshorne, and Bradley-Johnson (1998) surveyed 21 regular-education teachers of elementary-level students who were blind. Teachers rated 81% of these students as having difficulty at least sometimes in keeping their desks clean and neat without being reminded. Teaching students to keep their desks well organized and to put things away where they belong will enable these students to function more independently as well as more efficiently.

Because students with a severe loss of vision must rely heavily on auditory input, good listening skills are especially important. Good listening skills enhance independence. Yet, Buhrow et al. (1998) found that teachers rated 76% of the students who were blind as having difficulty sometimes or always in attending to teachers' instructions. For these students, praising them when they attend well, and asking them to repeat directions before beginning an assignment, should improve their listening skills.

Another concern of teachers in the Buhrow et al. (1998) study was that 62% of students who were blind did not finish their assignments in a timely fashion. This problem may be a result of several factors. First, Braille reading usually takes about two and a half times longer than reading regular type (Duckworth & Caton, 1986) and reading large type also takes longer than regular type. Fatigue is more of a factor when reading Braille or large type. Some regular education teachers may be unaware of the amount of extra time and fatigue involved and may set unrealistic time limits for these students. Problems with organization and listening may make these students less efficient in completing assignments. Teachers indicated that at least on some occasions 71% of the students who were blind were not using their time appropriately when waiting for assistance (Buhrow et al., 1998). Thus, if students who are visually impaired or blind are not completing assignments in a timely fashion, then consideration of the appropriateness of teacher expectations as well as students' organization skills, listening skills, and ability to use time effectively while waiting for help should help resolve the problem.

SOCIAL SKILLS

Visual information helps in monitoring social interaction, especially when nonverbal communication (e.g., gestures and facial expressions) is used (Erwin, 1993). Thus, it is not surprising that for students with limited visual input, social interaction may sometimes be difficult. Results of several studies of adolescents with visual impairments indicate that these students have fewer friends than their sighted peers (Kef, 1997; Hurre & Aro, 1998) and spend more time alone engaging in passive activity (Wolffe & Sacks, 1997). Though Buhrow et al. (1998) found that both parents and teachers rated the overall social skills of elementary-age students who were blind in the average range when compared to the sighted sample for the Social Skills Rating System (SSRS), they found that some specific social skills were problematic. Because of the potential for problems in this area, instructional planning for these students should include an examination of both the frequency and quality of interaction with others. Participation in clubs, sporting events, and other after-school activities should be encouraged as well.

Several factors specific to students with a severe visual loss may contribute to problems in social interaction. Students with little or no vision may need to be taught to turn to face someone who is speaking. Without this skill, interactions with others will be awkward. Orienting to a speaker may be particularly difficult when several people are speaking at the same time.

The use of prompts, feedback, reinforcement, peer mediation, and modeling have been helpful in teaching students with a severe vision loss specific social skills including eye gaze, initiation of social interaction, and joining activities. These skills have generalized and been maintained over time (e.g., Raver, 1987; Sacks & Gaylord-Ross, 1989). In addition, well-researched social skill training programs for sighted students can be helpful such as the *Social Skills Intervention Guide* (Elliott & Gresham, 1991), the ACCEPTS Program (Walker et al., 1983), and the ACCESS Program (Walker, Todis, Holmes, & Horton, 1988).

Although everyone engages in self-stimulation to some degree, students who are visually impaired or blind may self-stimulate at a higher frequency or engage in unusual behaviors. This is most likely to occur when a student is bored or stressed. Eye pressing and body rocking are the most frequent forms of self-stimulation for young blind children, and they tend to be quite stable behaviors (Brambring & Troster, 1992). These behaviors interfere with learning. Because these behaviors can make a child appear strange to others, they may negatively affect acceptance by peers. If these behaviors are observed, then intervention is needed to eliminate them. Brambring and Troster (1992) observed that when these behaviors occur in children over 4 1/2 years of age they are particularly stable even if they occur at a low frequency. Thus, intervention to eliminate body rocking or eye pressing should begin as early as possible.

Several different interventions have been effective in eliminating eye pressing including differential reinforcement of incompatible behavior (e.g., Raver and Dwyer, 1986), over-correction using arm exercises (e.g., Wesolowski & Zawlocki, 1982), and time out (e.g., Simpson, Sasso, & Bump, 1982). Likewise, different interventions have been effective in eliminating body or head rocking including head-band mechanisms (e.g., Felps & Devlin, 1988), restraint and time out (e.g., Barton & LaGrow, 1985), and verbal and physical prompts as well as praise (e.g., Ross & Koenig, 1991). Results of several studies, such as McHugh and Pyfer (1999) and Powers, Thibadeau, and Rose (1992), suggest that vigorous physical activity can decrease the occurrence of such stereotypical behavior. Results from studies designed to eliminate these behaviors are encouraging, though long-term follow-up and studies with older students in integrated settings are needed (DeMario & Crowley, 1994).

Effective procedures have been found for increasing positive behaviors that facilitate social interaction as well as procedures to decrease stereotypic behaviors that interfere with successful social interaction. An extensive and useful discussion of these procedures for different types of emotional and behavior problems for students who are visually impaired or blind is provided by Mar and Cohen (1998).

ORAL LANGUAGE

Students who are blind are not able to receive information conveyed by others through their facial expressions and gestures, which can interfere with their learning and communication. Unless someone is speaking to them or touching them, students who are blind cannot tell when someone is attending to them.

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As was noted previously, a thorough understanding of some concepts typically learned primarily through visual input also may be lacking.

Students with a severe vision loss sometimes have problems with articulation and in using pronouns correctly. Roland and Schweigert (1998) noted that students with vision use their vision to monitor activities around them, but students without vision may use their speech for this purpose. They do this by repeating information (words or phrases), by frequently asking questions, and by using their speech to attract others' attention more so than sighted students.

Reading

Prior to formal reading instruction, exposure to books and reading with adults are important for all children (Stratton, 1996). The *On the Way to Literacy* and *Discovering the Magic of Reading* programs noted earlier promote parent and child interaction while using books. Students who read Braille and those who read print both have to learn the same beginning skills (e.g., phonics, structural analysis, and recognition of whole words). Students who must read large-type material can be taught with regular basal readers where print is enlarged or magnifiers are used. When teaching Braille, a systematic approach should be employed such as *Patterns* (Caton, Pester, & Bradley, 1980), a basal program that goes through the third-level reader.

The movement to teach children with visual impairments in the general classroom may hinder access to daily, quality instruction in Braille (Johnson, 1996). It is important to ensure that all relevant materials within a student's classroom can be available to the student with visual impairment either through enlargement or Braille. When this is not the case, students miss valuable instructional time. To monitor progress in learning to read, use of a modified version of Curriculum-Based Measurement (CBM) can be very useful. Morgan and Bradley-Johnson (1995) found that use of a 2-minute rather than 1-minute probe, and use of 6 seconds in place of 3 seconds to prompt unknown words, was as reliable and valid for Braille readers as the standard CBM method is for sighted students.

A concern about Braille reading is speed. In a study by Trent and Truan (1997), the factor most related to reading speed was age at onset of blindness. No relationship was found between speed and degree of vision, comprehension, methods of instruction, age, attitude toward Braille, reading for pleasure, or type of school attended. The authors found that to develop speed, students need to read Braille on a daily basis for a considerable amount of time. They also concluded that Braille instruction should be done early, especially for students whose vision is such that eventually they will no longer be able to read print. Residual vision makes learning Braille easier than if it is learned when there is little functional vision, and the sooner a student begins learning Braille the more they will practice. Trent and Truan (1997) also found that those who begin to learn Braille in grade three or later usually do not catch up to those who begin Braille reading upon entering school.

Because Braille reading typically takes two and a half times longer to read than regular print, even the fastest Braille reader will not read at a rate commensurate with that of print readers. Trent and Truan (1997) concluded that because of the amount of required reading in regular classrooms, students with low or medium reading rates will require both listening to orally read or audiotaped material and access to Braille.

Layton and Koenig (1998) found that having students with low vision repeatedly read a short paragraph until they met a fluency standard increased oral reading fluency rate. This procedure has been effective with sighted students. Repeated reading is relatively simple to use, and children typically enjoy reading as they gain confidence. Increasing fluency is important so that students with low vision can be exposed to similar amounts of instructional material as their sighted peers.

Arithmetic

Because children between 5 and 9 years of age who are blind frequently have more difficulty solving simple arithmetic problems than their sighted peers, Ahlberg and Csocsan, (1999) examined how these students experience numbers. Results showed that these children did not spontaneously use their fingers to solve arithmetic problems, and had trouble showing a given number of fingers. This finding was consistent with results from a study by Ahlberg and Csocsan (1994), which found that children who are blind do not use their fingers to model numbers or to count. The authors hypothesized that this lack of finger counting occurs because children who are blind only perceive the finger most recently counted by touch without simultaneously experiencing the group of fingers. Instead, the authors found that grouping elements to be counted with both hands is important to the children's understanding of numbers. By grouping elements they can experience the elements as units to compose and decompose. They concluded that young children who are blind should be given opportunities to group elements through hearing and touch, rather than focusing on finger patterns or counting on their fingers.

WRITTEN LANGUAGE

Students who have lost their vision after having learned to write may be able to use script writing on raised-line paper. This paper is available from the American Printing House for the Blind (see address in the Bibliography). For students who cannot use script writing, however, another method will be needed. Some students will use a brailler (similar to a typewriter, but for Braille) or a more portable slate and stylus. Writing in Braille is very time consuming. Others will use a computer system with speech output, print, or Braille.

It seems that spelling skills of students who are blind are superior to those of sighted students. Layton and Koenig (1988) compared spelling skills of seventh and eighth grade students who were blind with those of their sighted peers and found the performance of students who were blind to be superior. Likewise, Grenier and Giroux (1997) found that spelling skills of ninth, tenth, and eleventh grade students who were blind and used grade 2 Braille were superior to those of their sighted peers. Though further studies in this area are needed with larger samples, it appears that spelling skills of Braille readers typically are well developed.

SUMMARY

To effectively meet the psychological and academic needs of infants, children, and adolescents with a severe vision loss, the school psychologist must work closely with the family and a variety of other professionals. A student's type of loss, degree of loss, and age at onset can have important implications for this educational planning.

Families may need assistance in understanding and coping with a student's vision loss, information on effective methods for reading to their child, or strategies to help with classroom performance. School psychologists can assist parents of infants, toddlers, and preschoolers who are visually impaired or blind by recommending procedures shown to enhance interaction with their child and facilitate the child's development. Issues of particular concern with young children include play skills, social interaction, language development, organizational skills, and sleep patterns. With school-age students a number of concerns often need to be addressed including organizational skills, listening skills, use of language, social skills, reading rate, and other issues relevant to Braille and large print. Fortunately there are many resources to assist in these areas.

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This book contains a listing of eye conditions and diseases that may be helpful in understanding the needs of individual students.

Sacks, S. Z., & Silberman, R. K. (1998). *Educating students who have visual impairments with other disabilities.* Baltimore: Brookes.

This is an excellent text describing research-based interventions. Because so many students with serious vision loss have additional impairments, this text is a very useful resource. Collaboration among professionals is emphasized. Many topics are addressed including orientation and mobility, functional vision, transition planning, communication, and use of technology. Chapters are included for students with a vision loss in addition to other impairments such as emotional problems, learning disabilities, hearing impairments, and neurological disabilities.

ORGANIZATIONS

American Foundation for the Blind (AFB), 11 Penn Plaza, Suite 300, New York, NY 10001 (212-620-2000 or 800-232-5463) (www.afb.org).

AFB provides technical assistance services to individuals who are visually impaired and to their families and to professionals and organizations. The AFB also publishes books, periodicals, pamphlets, videos, and talking books for professionals and consumers.

American Printing House for the Blind (APH), P.O. Box 6085, Louisville, KY 40206.
(1-800-223-1839) (www.aph.org).

APH publishes educational materials and assessment instruments, including materials adapted and transcribed in Braille or large type as well as recorded books and magazines.

Blind Children's Center, 4120 Marathon Street, Los Angeles, CA 90029. (1-800-222-3566).

The Center publishes booklets for parents of infants and preschoolers who are visually impaired or blind. Some topics include play, language, and movement. Most are available in English or Spanish.

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Best Practices in Working With School Interpreters to Deliver Psychological Services to Children and Families

Emilia C. Lopez
Queens College, City University of New York

OVERVIEW

A significant number of students in our schools speak languages other than English and demonstrate limited proficiency in English. The U.S. Department of Education (1998) estimated that between 1996 and 1997 approximately 8% of students enrolled in grades K–12 were English language learners (ELL), defined as students whose first language is not English and who are in the process of learning English. The families of many of our ELLs are also limited in their abilities to communicate in English. Cambodian, Cantonese, Hmong, Korean, Laotian, Navajo, Spanish, Tagalog, Vietnamese, and Russian are some of the most common languages spoken by linguistically diverse students and their families (Fleischman & Hopstock, 1993).

As a result of the large influx of immigrants from diverse cultural backgrounds, statistical projections indicate that the number of immigrant children and adults who speak languages other than English will increase in the twenty-first century (U.S. Department of Education, 1998). As the number of ELLs increase, there is a greater need for bilingual school personnel. The reauthorization of Individuals with Disabilities Education Act (IDEA) Amendments of 1997 states that students who are referred for special education evaluations should be assessed in their native languages. IDEA also states that the parents of children who are referred for special education assessment or services must be notified of their rights in their native languages either in written format or via oral translation. However, a frequent problem encountered in our schools is a shortage of bilingual personnel who can communicate with such a linguistically and culturally diverse student population.

In an effort to communicate with ELLs and their families, school psychologists sometimes use the services of school interpreters (Lopez, 2000; Ochoa, Gonzalez, Galarza, & Guillemard, 1996). The purposes of this chapter are to discuss the process of using interpreters and to provide some recommendations for school psychologists working with interpreters.

Definitions and Background

The term *translation* refers to the process of changing messages produced in one language to another language. The language from which one translates is referred to as the source language whereas the language into which the translation is made is the target language (Frishberg, 1990). The translation literature differentiates between the roles of interpreters and translators. Translators engage in the process of translating the *written* language as when, for example, translating books or legal documents (Frishberg, 1990). Translators are hired in school districts to translate documentation such as district policies and special education guidelines that are made available to students and parents who speak languages other than English (e.g., referral forms, Individual Educational Plans (IEPs)).

Interpreters are professionals who demonstrate expertise in translating the *spoken* language (Frishberg, 1990). In schools, interpreters work with a variety of school professionals to translate oral communication. Interpreters typically use two styles of oral translations referred to as simultaneous and consecutive translations (Frishberg, 1990). In simultaneous translation, the interpreter's translation is delivered a couple of seconds behind the speaker. Two common forms of simultaneous translation are whispered translation, in which the interpreter whispers the translation to the listener, and soundproof booth translation, where the interpreter speaks into a microphone and the message is delivered to the listener's ear via earphones.

The process of simultaneous translation is demanding for the interpreter because the interpreter is simultaneously listening to the speaker of the source language, understanding the message being delivered in the source language, converting the message into the target language, and delivering the message in the target language (Barik, 1973). The process is also difficult for the recipients of the translation because they are simultaneously hearing the original message in the source language and the interpreter's translation in the target language.

In consecutive translation, the speaker delivers his or her message in the source language and stops to allow the interpreter to deliver the message in the target language (Frishberg, 1990). There are two forms of consecutive translation, continuous and discontinuous. In continuous translation, the interpreter waits until the speaker has finished his or her entire message before delivering the translation. In discontinuous translation, the interpreter delivers the translation at periodic breaks.

According to Barik (1973), the faster the speech rate of the speaker in translation, the greater the number of errors made by interpreters. The translation research also indicates that the more pauses the speaker makes, the less likely the interpreter is to omit words from the message being translated. Finally, Barik reported that less qualified interpreters make more errors in translation, omit more information when translating, and engage in more literal translation.

Interpreters in School Settings

Several recent surveys have explored the use of interpreters in school settings. Lopez and Rooney (1997) surveyed interpreters who provided translation services in school settings in New York State. Lopez (1995) and Ochoa et al. (1996) surveyed school psychologists working with interpreters in several states throughout the country with significant numbers of ELLs (e.g., Texas, Florida, California). In general, the surveys indicated the following results:

1. School psychologists reported working with interpreters to deliver psychological services to a diverse group of ELLs. For example, Ochoa et al. (1996) reported that the school psychologists in their survey had assessed students from 85 different language groups through interpreters.

2. The school interpreters reported working with school psychologists during such activities as parent interviews, parent conferences, student interviews, and student assessments (Lopez, 1995).

3. The majority of the school psychologists indicated having little or no training to work with school interpreters during parent conferences and assessment sessions (Lopez, 1995; Ochoa et al., 1996).

4. The majority of school psychologists reported working with interpreters who had little or no training in translation and in issues relevant to working in schools (Lopez, 1995; Ochoa et al., 1996).

5. Individuals serving as interpreters in school settings have a wide range of backgrounds and experiences and include professionally trained interpreters, bilingual school personnel (e.g., teachers, secretaries), bilingual students, family members, and individuals from the community (Lopez and Rooney, 1997).

6. The school psychologists encountered a number of problems when working with interpreters to deliver psychological services in school settings, including miscommunications, interpreters delivering inaccurate translations, interpreters lacking an understanding of the assessment process, and interpreters violating confidentiality (Lopez, 1995).

Presently, there are no research data describing the translation styles most frequently used in school settings by interpreters. In the author's experience, consecutive translations are more frequently used in schools than simultaneous translations. Simultaneous translations require well-trained interpreters, and the interpreters being used in schools may not have the skills to deliver simultaneous translations. There are also no empirical investigations indicating what styles of translation may be most helpful when communicating with different speakers (e.g., preschool children versus older children or adults) within a variety of school-related situations (e.g., parent conferences, clinical interviews). Research investigating those areas will help school psychologists in the future to understand how to work with school interpreters to reduce errors in translation and to improve all communications with ELLs and their families.

BASIC CONSIDERATIONS

Understanding the Process of Working With Interpreters

As school psychologists continue to work with interpreters to provide psychological services to ELLs and their families, there is a call to develop an awareness of the complexities involved in the translation process. Many words and concepts cannot be directly translated from one language to another (Langdon, 1994). Metaphors, puns, and jokes tend to lose their meaning when literally translated. The meaning of words and concepts can also change when translated because they may have more than one meaning in the target language. Variations in vocabulary due to regional difference can also be challenging because the interpreter must have knowledge of the lexical variations used in specific regions or geographical areas (e.g., many Puerto Ricans call kites "cometas" whereas many Cubans call them "papalotes"). The developmental level of concepts can also change when translated from one language to another. All these difficulties are inherent to the process of translation and can result in miscommunications if interpreters are not competent communicators and if school psychologists are not aware of the impact of translation on the communication process.

It is often assumed that the interpreter is merely a tool that the school psychologist can use to communicate with ELLs and their families and that as long as we ask the right questions and probe for clarification, we will obtain valid and reliable information through interpreters. However, because interpreters are human beings and are not merely translation machines, the quality of the outcomes obtained from the process of using interpreters will depend on the interpreters' skills and their understanding of the psychological services provided by school psychologists. Information can easily be lost in translation if interpreters do not demonstrate bilingual and bicultural competence (Cokely, 1987). The presence of the interpreter can substantially change the quality of the interaction between school psychologists and their clients. Thus, the interpretations derived from those interactions need to be cautiously examined in all situations where interpreters are used. In essence, all information obtained through interpreters must be questioned because of the mere fact that the information is filtered through the interpreters and the school psychologists are in no position to judge the quality of the translation because of their limited proficiency in the ELLs native languages. As the chapter continues, issues relevant to the assessment process, and to competencies needed by interpreters and school psychologists are explored.

Translation and the Assessment Process

Perhaps one of the most controversial issues is the use of interpreters in the practice of translating tests. Lopez (1995) found that school psychologists often ask interpreters to translate test questions either on the spot or before the testing session. On-the-spot translations involve the school psychologist reading testing questions to the interpreter during the testing session and the interpreter translating them during the session for the student being assessed. The interpreter then translates the student's responses to the school psychologist.

In an investigation designed to explore the types of translation errors that can occur when untrained interpreters conduct on-the-spot translations, Lopez (1994) asked interpreters with little or no experience and training in translation or in assessment issues to translate questions from the Wechsler Intelligence Scale for Children-Revised (WISC-R) into Spanish. Lopez chose the WISC-R because it has an equivalent version that was translated and pilot tested in Spanish called the Escala de Inteligencia Wechsler Para Niños-Revisada (EIWN-R). The equivalent version in Spanish was used to examine the quality of the interpreters' translations and to code the types of translation errors that the interpreters made when translating the test questions. A translation error classification scheme developed by Barik (1971) was used to code the interpreters' errors. The results indicated that the interpreters sometimes omitted, added, and substituted words and phrases that significantly changed the content and the meaning of the questions and directions. There were even situations in which the interpreters were not at all able to translate specific words because they did not have the appropriate vocabulary in Spanish.

Another practice used by school psychologists is to provide the interpreter with the manual before the translation session begins so that the interpreter can translate the test questions prior to the assessment session (Lopez, 1995). The assumption made is that if the translation is conducted prior to the testing session, then the quality of the translation will be better because the bilingual interpreter has more time to work on a more accurate translation. However, the additional time factor will not necessarily result in a better product because the practice of translating tests is problematic for several reasons. As previously discussed, equivalent words or concepts may not be found when translating from the source to the target language. Thus, the content of test items may change substantially. The developmental level of an item or question may also change when the item is translated into the target language (Langdon, 1994). Examples can be found in the translation of the WISC-R to the Spanish EIWN-R. When the questions in the Information subtest of the WISC-R were translated into Spanish and the translation was pilot tested, the test publishers found that the developmental level of some of the questions changed based on the performance of the children who participated in the pilot testing. Neither the school psychologist nor the interpreter will be able to accurately judge the developmental level of the items simply based on their practical experience (Bracken & Barona, 1991).

Bracken and Barona (1991) add that the process of simply translating test items is problematic because test directions are frequently too "psychotechnical" or difficult to allow for easy translation and versions of translated tests produced by practitioners and interpreters are rarely "sufficiently perfected" to provide equivalent meanings across language. Furthermore, test adaptation experts argue that test translation can result in significant changes in the underlying psychological constructs assessed by the translated version of the test (Bracken & Barona, 1991; Geisinger, 1994). Thus, test translation can alter test validity for ELLs.

According to Geisinger (1994), merely translating a test is not sufficient when the "the new target population differs appreciably from the original population with which the assessment device is used in terms of culture or cultural background, country, and language" (p. 304). In such situations, the test must be adapted through the following procedures: (a) translating the test questions, (b) reviewing the translated version through an editorial review committee, (c) adapting the draft instrument on the basis of the comments made by the editorial review committee, (d) pilot testing the instrument, (e) field testing the instrument, (f) standardizing the scores, (g) obtaining validation data, (h) developing a manual and documentation, (i) training users, and (j) collecting reactions from users (Geisinger, 1994). In regards to the establishment of validation data, Geisinger points out that the validity and reliability of the adapted measure must be established to "demonstrate that the instrument continues to assess the same qualities with the same degree of accuracy in the new population" (p. 308). That recommendation is supported by the Standards for Educational and Psychological Testing (American Educational Research Association, American Psychological Association, National Council on Measurement in Education, 1999) which state that when a test is translated from one language or dialect to another, its reliability and validity should be established for the uses intended with the linguistic groups to be tested.

The problems of using interpreters during assessment sessions are not limited to loss of validity in the process of translating test questions. Once the interpreter translates the test question, the interpreter also translates the student's response for the benefit of the school psychologist, and miscommunications can also occur at that stage of the translation process. How is the school psychologist to know that the interpreter's translation is an accurate representation of the student's message in terms of content, grammatical organization, and emotional intent? Because of the nature of the translation process, the interpreter must avoid delivering a literal translation and must filter the message so that the translation conveys the original intent of the sender. Thus, the school psychologist must solely rely on the interpreter's rendition of the student's message.

How is the school psychologist to know if the speech patterns demonstrated by the student in the native language are a function of a speech impairment or are due to dialectical/regional differences? For example, Spanish speaking Caribbean children tend to drop the "s" sound, signifying plural, from the ends of words. That is a speech pattern that is not considered a function of impairment and is viewed as a function of the children's regional origin (i.e., Caribbean countries such as Puerto Rico and Cuba). One can argue that the school psychologist will make those judgments based on carefully crafted questions directed at the interpreter such as, Did the student have difficulty making any sounds in his/her native language? Are those speech sounds typical of individuals from the child's region? However, the reality is that the answers to these questions will be largely dependent on the skills of the interpreter in translating the student's messages and in their thorough understanding of the rules and functions of their native language. The competent interpreter will be able to help the school psychologist to examine the children's language skills from a developmental perspective.

The competent interpreter will also be helpful to the school psychologist in examining the student's responses and behaviors from a cross-cultural perspective. Lopez (2000), for example, found that the interpreters used in her study to communicate with high school ELLs helped the consultants to understand that the Mandarin- and Polish-speaking students were having difficulties viewing portfolio assessment assignments as assessment tools and working collaboratively with peers to complete their portfolio work. For those students, being assessed meant sitting in a room, working individually to answer a series of test questions, and obtaining grades based on the product they produced on the test. The students' attitudes toward the portfolio assessment process were affecting their performance because they did not view portfolio assessment as a legitimate form of assessment and because they did not understand the process of working cooperatively to receive grades. In these cases, the interpreters' familiarity with the students' educational experiences in their native countries, and the interpreters' abilities to communicate those issues with the consultants, were instrumental in examining the students' behaviors from a cross-cultural perspective.

In the examples cited above, school psychologists are dependent on the interpreters to translate the students' messages, express the students' intent, and examine behavior cross-culturally. As such, anything less than a well-trained interpreter will result in miscommunications and erroneous analyses of behaviors. Ultimately, because the school psychologist is so dependent on the skills of the interpreter, too much is left to chance if school psychologists assume that they can conduct valid assessments by relying on the translations and judgments of inexperienced or poorly trained interpreters.

Competencies for School Interpreters

Translation is a complex and demanding process that requires highly competent interpreters. It is widely agreed within the field of interpreter training that interpreters must possess a number of important competencies that include high levels of proficiency in the source and target languages; knowledge of the cultural backgrounds of the clients they are translating for; knowledge and skills in the different types of translation styles (e.g., simultaneous and consecutive translations); professional conduct as in understanding their roles, behaving ethically, and adhering to confidentiality; excellent listening skills; and excellent long-term and short-term memory (Castle, 1984).

In addition, interpreters must possess sufficient knowledge of the situations in which they are translating to deliver messages that are contextually appropriate because what is not understood cannot be translated and what is incorrectly understood will be incorrectly translated (Castle, 1984). Ultimately, the goal of the translation process is to convey the message originally expressed in such a way that the content of the message remains accurate when translated into the target language, retains the original meaning, and evokes the same emotional response as the original message (Cokely, 1987).

For interpreters who translate in school settings, understanding the educational context is crucial. For example, school interpreters must be familiar with the education system, district policies, and school policies to be able to understand and translate accurate information to children and parents (Langdon, 1994). Interpreters must be knowledgeable of technical vocabulary used by school psychologists such as diagnostic categories (e.g., learning disabilities, emotionally disturbed), educational programs (e.g., special education, acceleration, inclusion), and psychological terms (e.g., cognition, assessment, exceptionality).

The interpreters' ability to understand the cultural context of communication is also important given the need to work with families who are culturally diverse. In an investigation designed to explore how culturally different families view exceptionality, Harry (1992) reported that Puerto Rican families in her study tended to view the mild mentally retarded label as being synonymous with severe forms of mental handicaps. When first introduced to the concept of mild retardation, many of the parents in the investigation responded with confusion and distress because they associated the terms with "loco" or crazy. In time, some of the parents became more accepting as they began to equate the mentally retarded classification with other terms such as "slow." In these situations, interpreters and school psychologists must be prepared to help the families to understand the labels within the families' own cultural framework. For interpreters, it is particularly important to have a repertoire of vocabulary in the target language that will help them in the process of explaining diagnostic categories and psychological concepts that are more culturally congruent with culturally diverse families.

Interpreters' knowledge of developmental and psychological issues is imperative in situations where interpreters work with school psychologists to provide translation services to children of different age groups and to students with mental health, behavioral, and medical problems. Marcos (1979), for example, found that when interpreters were asked to translate for patients who had thought disorders, the interpreters often changed the client's statements so that they sounded like they made more sense. School psychologists who provide services to handicapped populations must use interpreters who have knowledge of the different types of behaviors and disorders that children with mental health, educational, and behavioral difficulties exhibit so that the interpreters are better prepared to deliver accurate translations and to respond appropriately to situations where the students exhibit unusual behaviors (e.g., seizures, inappropriate verbalizations, conduct problems).

Our work as school psychologists entails establishing rapport with our clients and gaining their trust to create an environment that is conducive to collaboration and problem solving. Thus, interpreters must possess excellent interpersonal skills and skills in establishing rapport with children and families. The presence of an interpreter might serve as a barrier as well as a facilitator in the process of establishing rapport with clients. In a qualitative investigation where interpreters were used within the instructional consultation process, Lopez (2000) found that the interpreters were often very helpful in establishing a trusting relationship with the students and families because the students and parents viewed the interpreters as facilitating their communication with the consultants and consultees. In contrast, a student from Ethiopia who spoke Amharic felt inhibited by having to communicate through an interpreter who was part of the student's community. The student felt inhibited in discussing many issues related to his family because he feared that the interpreter would not keep the information confidential. This case exemplifies how the presence of the interpreter can interfere with the establishment of rapport with students. Interpreters who understand the social context of the translation process can serve as facilitators in the process of examining the dynamics involved in providing psychological services through interpreters and can work collaboratively with school psychologists to overcome barriers in establishing rapport with ELLs and their families.

According to Anderson (1976), because the interpreter holds the key to the communication process in situations where individuals from different language backgrounds cannot communicate with each other, the interpreter's position is pivotal and has the advantage of power. Anderson adds that the interpreter's position of power "is inherent in all positions which control scarce resources" (p. 218). As such, the interpreter may exert control by translating all that is said or part of what is said. Lopez (2000), for example, found that one of the interpreters working in the case study of a Polish student who was receiving instructional consultation services was unwilling to translate everything said in the interviews with the student and parents because the interpreter felt it was too time consuming. The interpreters' feelings toward the clients and their reactions toward the issues being discussed may also interfere with their ability to deliver accurate translations. Nida (1964) acknowledges that interpreters may not be able to avoid a certain degree of personal involvement in their work and may attempt to change the content of the messages they translate to fit their own personal, political, social, or religious preferences. Thus, school interpreters must develop a clear understanding of their roles along with the ability to reflect on how their own feelings and actions influence the delivery of psychological services to ELLs and their families.

Competencies for School Psychologists

Figueroa, Sandoval, and Merino (1984) have outlined the competencies needed by school psychologists to work with ELLs. The competencies outlined by Figueroa and his colleagues include cross-cultural awareness, skills in non-discriminatory assessment, knowledge of language development and second language acquisition, and knowledge of interventions appropriate for ELLs.

Those competencies are the basic prerequisites for any school psychologist working with interpreters to communicate with ELLs. In addition, school psychologists must demonstrate specific competencies to work with interpreters. Among the competencies needed by school psychologists are skills in establishing rapport with ELLs and families through interpreters, skills in interviewing clients through interpreters, skills in conducting meetings with clients through interpreters, and skills relevant to reporting results obtained through interpreters (Lopez, 1999; Rogers et al., 1999).

An understanding of the problems inherent in the translation process is also pivotal for school psychologists. Since many concepts and vocabulary words cannot be directly translated from the source language to the target language, school psychologists must communicate clearly with interpreters so that interpreters can understand what information needs to be conveyed in their translations. The more information the school psychologist provides the interpreter, the better prepared the interpreter will be to deliver translations that convey the intent of the original message.

The school psychologists' awareness of the emotional and social aspects of using interpreters is another important skill. For example, the child may identify with the interpreter because he may see the interpreter as the protective one or simply because the interpreter is able to communicate with him in the native language. As a result of such interactions, school psychologists can often feel resentful, frustrated, guilty, left out, or powerless when working with interpreters. An awareness of such issues can be helpful to school psychologists when examining the social interactions observed during the process of using interpreters.

Skills in training interpreters to deliver psychological services are additional competencies for school psychologists. Given the breadth of information that school interpreters must have to work effectively in the delivery of psychological services, school psychologists must provide training for school interpreters to work in such situations as meetings, interviews, and assessment sessions. Finally, school psychologists must have a clear understanding of the limitations of assessing students through interpreters. An understanding of those limitations should help school psychologists to advocate for students in situations where interpreters should not be used and to make cautious interpretations when interpreters are used.

RECOMMENDED PRACTICES

At the present time, school psychologists are working with interpreters during a variety of activities including interviews, conferences, and assessment sessions. However, there is an absence of policies and guidelines at the systemic level to guide our practice in the use of school interpreters. The recommendations made in this chapter address systemic and practitioner issues. At the systemic level, the need to provide guidelines for the practice of using school interpreters is addressed. A number of recommendations are also made for school psychologists involved in the delivery of psychological services through interpreters.

Systemic Recommendations

At the present time, the practice of using interpreters continues despite the absence of clear guidelines for practitioners. Ochoa et al. (1996) argue that the National Association of School Psychologists and the American Psychological Association need to provide criteria as to how to work with interpreters during assessment situations. However, the need for clear guidelines extends beyond assessment. Our professional organizations must also address the guidelines that should be followed when working with interpreters during conferences, interviews, and other activities in schools. Furthermore, national and state policies should be created outlining the procedures that should be used for working with interpreters in school settings and the qualifications for school interpreters. State education agencies and districts need to develop guidelines for training and credentialing competent school interpreters. The guidelines should address the need to hire interpreters with adequate training in translation, and with high levels of proficiency in English and the second language. The need for guidelines and policies is imperative given the current practice of using interpreters with little or no training to assess, classify, and place ELLs for special education programs (Lopez, 1995).

Plata (1993) proposed a management system to coordinate the services offered by school interpreters. He recommended that districts develop a roster of qualified interpreters; guidelines for outlining interpreters' roles; guidelines and procedures for selecting and working with interpreters; a system for monitoring the interpreters' practices; a plan for interpreter and school personnel training; a reward system for compensating interpreters; procedures to help interpreters to improve their performance; plans for conducting formative and summative evaluations relevant to the interpreters' programs; and a plan to employ bilingual school personnel to diminish the need to hire interpreters. Given the absence of national, state, and local policies addressing the use of school interpreters, school psychologists can work with district administrators to implement the management plan recommended by Plata (1993). At the systems level, school psychologists can also advocate for ELLs and families by working with other school personnel to develop guidelines as to the kind of credentials, training, and experiences school interpreters must demonstrate.

Local school districts and school psychology training programs need to work collaboratively with interpreter training programs in universities across the nation to develop preservice and inservice training programs for school interpreters. Interpreter training programs expose their trainees to a number of courses that target basic principles in translation, verbal expression, professional roles, and ethics (Castle, 1984). In addition, interpreter training programs offer courses that target setting-specific situations such as translating during conferences and legal proceedings (Cokely, 1987). The training programs use a variety of tools to sensitize interpreters to the psychological and social contexts of translation including practicum experiences; analysis of video tapes and audio tapes; and role playing (Frishberg, 1990). Given our expertise in educational and psychological issues, school psychologists have a pivotal role in training interpreters to deliver translation services to ELLs and their families in schools. School psychologists can be instrumental in developing courses and workshop experiences that can help interpreters to acquire specific knowledge and skills to deliver translation services in schools. The use of role plays and the examination of video tapes and audio tapes of different situations where interpreters are needed can also be helpful in training interpreters to acquire specific skills such as translating during clinical interviews and parent meetings. Practicum experiences can also be created for interpreters to receive practical experiences in working in school settings with a variety of professionals.

Recommendations for School Psychologists

When working with ELLs and their families during such activities as consultation, clinical interviews, and special education assessment activities, school districts should make every effort possible to obtain the services of bilingual school psychologists who are familiar with the language and culture of the clients. The *Directory of Bilingual School Psychologists* (National Association of School Psychologists, 2000) should be a useful resource at the national level. Local directories should also be developed at the state and district levels so that districts can share interpreters. When bilingual school psychologists are not available, school psychologists should work with interpreters who demonstrate the competencies outlined earlier in this chapter, including bilingual as well as bicultural competencies.

When professionally trained interpreters cannot be located, school psychologists may find themselves in the position of having to use bilingual school personnel with educational expertise to provide translation services. Among the bilingual school personnel who may provide assistance are teachers, social workers, counselors, teacher's aides, and trained paraprofessionals. School psychologists should provide the bilingual school personnel with the necessary training to prepare them for their roles as interpreters. If bilingual school personnel are not available, then the school psychologist may want to locate individuals from the community who demonstrate bilingual proficiency and who are familiar with the cultural backgrounds of the students. Community members serving as school interpreters may be in need of extensive training if they are unfamiliar with the educational and psychological issues that they will encounter in their roles as interpreters (Lopez, 2000).

Trained interpreters, school personnel, and community members who have dual relationships with specific clients should not be placed in the position of providing translation services for those clients. As such, placing school children and family members in the roles of interpreters is not recommended (Lynch, 1998). The confidential and sensitive nature of the issues we discuss with children and parents precludes bilingual peers from acting as interpreters during interviews, conferences, and assessment situations. Peers and family members who are placed in the roles of interpreters can have difficulty delivering accurate translations because they may lack the language skills needed for the task. In addition, their personal involvement with the student and family may interfere with their ability to remain objective during the translation process. As such, they may refrain from translating everything that is said because they do not agree with the content of the discussion or because they may wish to protect the student or family member they are helping.

Providing psychological services through interpreters is time consuming because of the many barriers that can be encountered during the process. Lopez (2000) reported that consultation activities took longer than expected because of the difficulties in locating qualified interpreters and the need to provide interpreters with adequate training to translate during consultation sessions. In addition, the time consuming factor is inherent in the process of translation because of the need to filter all communication through a third party (i.e., the interpreter). School psychologists should acknowledge and expect that activities conducted through interpreters will take additional time. That factor should be shared with other school professionals involved in the activities where interpreters will be used so that time constraints are acknowledged early on during the process and steps can be taken to prevent the violation of any explicit or implicit deadlines.

Opportunities for interpreters to establish rapport with clients help clients to feel comfortable with the interpreters (Lopez, 2000). Thus, school psychologists may want to ask interpreters to meet with ELLs and their parents prior to translation sessions. School psychologists should discuss rapport building sessions with interpreters to establish the parameters of the encounter. For example, during those rapport sessions interpreters should abstain from discussing any issues that will be brought up during conferences, interviews, or assessment sessions.

A number of practices recommended in the literature for school professionals working with interpreters are provided in Table 1. The practices were adapted from the existing literature on interpretation and translation (Fradd & Wilen, 1990; Langdon, 1994; Lopez, 2000; Lynch, 1998). It should be noted that the practices recommended in Table 1 assume that the interpreters have adequate competencies and high levels of language proficiency in English and the second language.

Before working with interpreters, school psychologists should conduct briefing sessions with them. If other school personnel are joining the school psychologist for activities such as meetings and interviews with parents, then the briefing session should be conducted with all relevant personnel. Briefing sessions provide school psychologists with the opportunity to discuss with the interpreters the background information needed to prepare for the translation session such as procedures that will be used (e.g., interviews, meetings, assessment) and topics that will be discussed (i.e., special education issues, technical vocabulary). The briefing session is also the time when the school psychologist may want to explore the cultural issues that he or she needs to be aware of to work with ELLs from diverse cultural backgrounds. Table 1 also provides a list of recommendations that should be followed during translation sessions as well as during debriefing sessions. Debriefing sessions are held after translation sessions for school psychologists and interpreters to discuss issues and problems that surfaced during the translation process.

Table 1. **Recommended practices for school psychologists working with interpreters**

The following recommendations apply to such activities as interviews, conferences, and assessment sessions. The recommendations are made with the assumptions that the interpreters have adequate training to work in schools and demonstrate high levels of proficiency in English and the second language.

During briefing sessions:

- Establish sitting arrangements. Stansfield (1980) recommends that the clinician and the interpreter sit next to each other with the interpreter sitting slightly behind the clinician. According to Stansfield, this sitting arrangement allows the clients to see both the interpreter and the clinician, the client can look at both the clinician and the interpreter to receive verbal and nonverbal messages from both, and the clinician will be in a position of facing and directly talking to the client.
- Provide the interpreter with an overview of the purpose of the session. The overview should include a description of the activities that should take place such as interviews, discussions, and questions. The interpreter should be apprised of the purpose of the translation session (i.e., to obtain information about the student's developmental background; to provide parents with feedback regarding the student's functioning).
- Provide the interpreter with any information that the interpreter needs to understand the context of the situation. For example, inform the interpreter of any unusual behaviors or verbalizations that may be characteristic of the student based on the diagnostic classification.
- Address issues related to confidentiality and describe boundaries of confidentiality.
- Decide what type of oral translation will be used. Since the translation research supports the use of translation styles that provide frequent breaks for the interpreter to deliver messages with fewer translation errors, discontinuous consecutive translations may be most appropriate for school settings.
- Provide the interpreter with the opportunity to examine and translate any documents that may need translation during the session (i.e., IEPs, letters).
- Discuss technical terms that will be used during the session (i.e., diagnostic categories, special education terms, psychological terms), and encourage the interpreters to ask questions about any vocabulary or concepts that they need more information about.
- Discuss cross-cultural issues form the perspective of communication and behaviors. For example, the school psychologist may want to greet cross-culturally different families in ways that are culturally appropriate. Also, explore with interpreters the pragmatic rules pertinent to the students' cultures (Plata, 1993).
- Discuss with the interpreter the expectation that everything said will be translated to the clients and that the interpreter should translate all communication from clients.
- If the appropriate tools are available and prior to the assessment session, the interpreter should review all assessment materials and should have the opportunity to ask questions relevant to the assessment materials. Discuss with the interpreter concepts related to standardization, validity, reliability, and conduct during assessment sessions (e.g., do not coax students).
- Fradd and Wilen (1990) suggest developing an agenda to follow during the translation session. The agenda should list all the issues that will be covered during the session. The agenda should be reviewed by the school psychologist and the interpreter during the debriefing session.

During sessions when interpreters are being used:

- Take the time to welcome the children and parents. The interpreter should introduce herself or himself, you (that is, the school psychologist), and any other school professional present during the session. If sitting arrangements have been predetermined, then you should be specific as to where everyone should sit.
- Take time to establish rapport with the clients. Speak directly to the clients and direct your attention to the clients when they are speaking. Avoid the ping-pong effect of darting your eyes and attention back and forth from the clients to the interpreter.
- Figueroa (1989) recommends the use of audiotapes during translation sessions. The audiotapes can provide school psychologists and interpreters with opportunities to review the session at a later point. If audiotapes are used, then permission must be obtained from parents and other participants. The permission should be obtained in writing. The decision to use audiotapes must be made taking into consideration that the presence of tape recorders may inhibit clients to discuss sensitive or confidential issues.
- Speak in short sentences and allow time for the interpreter to translate everything said during the session. Communicate to the clients that they need to stop periodically to allow the interpreter to translate their messages. The interpreter should be ready to ask the client to slow down or to speak in short sentences if the rate of speech is too fast or if the client is not stopping frequently enough to allow the interpreter to translate their messages. In situations where the inter-

Table 1. (Continued)

preter and the clients become involved in long discussions, then be ready to remind the interpreters and the clients that all communications must be translated.

- Avoid idioms, slang, and metaphors because they are difficult to translate.
- Take notes relevant to any issues that need to be discussed during debriefing. The interpreter should also take notes. For example, terms that were difficult to translate or cross-cultural issues relevant to communication can be noted and discussed during debriefing sessions.
- During conferences and interview sessions, periodically ask the client questions to establish that they are understanding the content of the communication. Asking clarifying questions is helpful in situations where information was lost as a result of the translation.

During debriefing sessions:

- Discuss with the interpreter the outcomes of the translation session. In addition, discuss any translation problems that may have surfaced during the session and their implications.
- After assessment sessions and student interviews, discuss cross-cultural issues relevant to the student's responses and behaviors. Acknowledge cultural differences and discuss their role in the assessment process.
- Encourage the interpreter to ask questions regarding the translation session. Also, encourage the interpreter to discuss his or her perceptions of the translation session and the cultural issues that surfaced during the session.

Recommendations Relevant to Assessment Sessions

The need for a special education referral should be carefully examined for all ELLs. Pre-referral alternatives such as consultation and prevention services (e.g., changes in instructional program) should be implemented before referring ELLs to special education. Bilingual psychologists who are proficient in the students' native languages should assess ELLs who are referred for bilingual evaluations. Trained interpreters should be used only when all resources have been exhausted to locate bilingual school psychologists and when a referral is imperative.

If an interpreter is needed to perform the evaluation, then multiple procedures should be used to collect the assessment data. When interviews are used as assessment tools, the school psychologist should consult the practices listed in Table 1. On-the-spot translations of standardized achievement and cognitive tools are not recommended. The first choice should be using testing tools that have been translated and validated for the population being tested. If such tools are available, then the school psychologist must provide the interpreter with training to assist in the assessment process. Among the applicable recommendations are providing interpreters with the opportunities to familiarize themselves with the testing tools and to practice administering the test. Once interpreters are familiar with testing procedures, they are better able to understand the assessment process and to follow the school psychologists' directions.

School psychologists assessing Spanish-speaking students can utilize the Bateria Woodcock-Muñoz (Woodcock & Muñoz-Sandoval, 1996) if they feel it is appropriate for the cultural and language background of the students being assessed. If the student's academic skills must be assessed in the first language and adequately normed tools are not available, then the school psychologist can work with a bilingual teacher or other qualified bilingual personnel to develop informal curriculum-based assessment procedures such as informal reading inventories and writing sample tasks. Newspapers and developmentally appropriate books in the native language can also be used for informal assessment purposes.

Informal translations of cognitive assessment tools are not recommended. The Universal Nonverbal Intelligence Test (UNIT) is a recent cognitive assessment tool that provides school psychologists with the means to assess ELLs nonverbally (McCallum & Bracken, 1997). The instructions for the test are delivered through pantomime and do not require any verbalizations from the students. Although more validity data are needed at this time to establish its utility with ELLs, the UNIT seems to be a preferable alternative to using interpreters to translate testing questions.

The Bilingual Verbal Ability Tests (BVAT; Muñoz-Sandoval, Cummins, Alvarado, & Ruet, 1998) is another tool that school psychologists can consider when working with interpreters to assess students' language skills. The BVAT is available in 15 languages, including Arabic, Chinese, English, French, German, Haitian-Creole, Hindi, Japanese, Korean, Polish, Portuguese, Russian, Spanish, Turkish, and Vietnamese.

Any reports generated for the purposes of describing data obtained through interpreters should include a number of points. In addition to any language and cultural data pertinent to the student's background, the report should clearly indicate that an interpreter was used. A clear description should also be included of the extent to which the interpreter was needed. For example, school psychologists should indicate if the interpreters were needed for the entire assessment or interview session or only infrequently. In addition, the report should indicate the style of translation that was used (e.g., simultaneous, consecutive) and a clear description of any assessment procedures that involved the use of interpreters. The report of any evaluation data collected through interpreters should address the validity and reliability of the findings. When necessary and appropriate, results should be presented in qualitative formats. All assessment data should be interpreted within the context of the students' cultural backgrounds. If the findings are questionable because the process of working with the interpreter did not yield valid assessment data, then the test report should clearly state so and the recommendations should address the need for a bilingual evaluation by a qualified school psychologist.

SUMMARY

This chapter makes a number of recommendations for school psychologists working with interpreters. Interpreters were defined as professionals who provide translation services in the context of spoken communication. In school settings, school psychologists work with interpreters during a variety of activities including interviews, conferences, and assessment sessions. School interpreters facilitate the communication between school psychologist and ELL children.

The process of translation is complex and demanding. School interpreters must exhibit a number of important competencies. Their bilingual and bicultural competencies are important because of their involvement in providing psychological services to ELLs and their families. A number of practices were recommended targeting systemic and practitioner issues. The information provided here does not answer all the questions about the practices of working with interpreters. Literature relevant to the use of interpreters is scarce, and little research has been conducted in this area.

Despite the fact that there are many unanswered questions, school psychologists often find themselves in the position of working with interpreters in a variety of situations. The pressures of providing services to diverse groups of students and their families should not mean that school psychologists should engage in such questionable practices as using untrained interpreters to translate tests on the spot. Our practices should always be guided by the ethical and professional principles dictated by our profession. Because of our expertise in human behavior and functioning, school psychologists should play a critical role in defining the competencies and practices of school interpreters providing services to ELLs and their families. School psychologists must also develop competencies to work with school interpreters. The profession of school psychology needs to begin to establish a dialogue about the practice of using interpreters to provide psychological services. Guidelines and policies must be developed at the national, state, and local levels to support the use of recommended practices when working with interpreters. Without guidelines for recommended practices we are inadvertently sanctioning the use of untrained interpreters and ignoring questionable practices that have a negative impact on the ELLs with whom we work.

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This is a qualitative investigation that explored the practice of using interpreters during instructional consultation activities. The findings address the facilitators as well as barriers encountered when using interpreters in consultation

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Best Practices in Working With Students With Traumatic Brain Injury

J. Michael Havey
Eastern Illinois University

OVERVIEW

Imagine that in a school you serve there is a child who is bright, active, and well behaved. Imagine that the child changes radically in a short period of time, and he is no longer capable and well behaved. What was once a teacher's dream student is now the student who needs more teacher attention and help than anyone else in the classroom. This scenario, unfortunately, is not rare. It describes an all-too-common situation following a traumatic brain injury (TBI). Although it is only within recent years that TBI has received legal recognition as a distinct category within special education, the disability is not new and nor is it rare. In fact, TBI is the number one killer and disabler of children and young adults in this country. According to the Brain Injury Association, traumatic brain injury is the most frequent cause of disability and death among children and adolescents in the United States. Each year, more than 1 million children sustain brain injuries ranging from mild to severe trauma. Of those, more than 30,000 endure permanent disabilities as a result of their brain injuries. Moreover, according to the National Pediatric Trauma Registry, about one third of all pediatric injury cases in the United States are related to brain injury (Brain Injury Association, no date). The tragedy of this condition is intensified because it is unforeseen and unexpected.

As medical technology has improved, so have survival rates of those who have sustained this type of injury. Also, the trend toward limited hospital stays has increased the focus on post-acute school and community programs (Gerring & Carney, 1992). The results of these trends are that increasing numbers of children with TBI are returning to schools, and schools are called upon to be major providers of long-term rehabilitation for these individuals. School psychologists who are knowledgeable about this disability can play a meaningful and important role in providing these services.

Educationally, TBI is defined as:

> an acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that adversely affects a child's educational performance. The term applies to open or closed head injuries resulting impairments in one or more areas, such as cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem solving; sensory, perceptual and motor abilities; psychosocial behavior; physical functions; information processing; and speech. The term does not apply to injuries that are congenital or degenerative, or brain injuries induced by birth trauma (34 C.F.R. 300.7 (c) (12)).

As do other categories of educational disability, this definition excludes some children. The present educational definition includes children who are adversely affected by "an external physical force." It explicitly excludes those children whose brains may have been affected by congenital or degenerative conditions (e.g., hydrocephaly, microcephaly) as well as those whose brains may have been injured by birth trauma. The definition also omits mention of those children who might suffer from an "internal" incident such as a vascular accident (stroke). Children who, because of the congenital or degenerative nature of their conditions, are excluded from special education eligibility under the TBI category, may still be eligible for special education and related services under another category, or they may be eligible for accommodations under Section 504.

Brain injury caused by external physical force is typically divided into two major classes: open and closed. Open brain injury is the result of an injury in which the brain is penetrated from the outside. Examples include a gunshot wound or a crushing of the skull. Damage from such an injury tends to be localized (focal) and to result in fairly predictable impairments. Closed brain injury, the most common type among children, results when a moving object (e.g., baseball bat) strikes the stationary head causing a sudden jolt (acceleration injury) or when the moving head is abruptly stopped or slowed (deceleration injury) by a stationary object (e.g., car dashboard) . In contrast to penetrating or open head injury, damage resulting from closed head injury is almost always diffuse (widespread) owing to both the nature of the physical agent involved and the characteristics of the human brain and central nervous system. The brain is of a gelatin-like consistency. Strong impacts cause the brain to move in a rippling manner inside the skull. Twisting and tearing of tissue often results from this movement. This damage is exacerbated by the fact that the inner surface of the skull is rough and rigid. The movement of the brain across this surface causes additional tearing. Damage obviously occurs at the point of impact (coup) in a closed head injury. Additional damage also occurs to the area of the brain opposite the site of actual contact (contracoup). In addition to the mechanisms described above that are collectively known as "primary" brain damage, closed head injury also often results in "secondary" injuries that can occur subsequent to the initial injury. These include bleeding, swelling of tissue, decreased blood flow, elevated pressure, and infection. Because tissue damage from closed head injury can affect such widespread areas, predicting functional impairment can be especially difficult.

The etiology of TBI is heterogeneous. Although closed brain injury is more common among children than open brain injury, cause of injury tends to vary with age. Bruce and Mira, Tyler, and Tucker (as cited in Blosser & DePompei, 1994b) categorized causes of injury by age as follows:

Age	*Cause of Injury*
Infants	Mishandling by caregivers, accidental dropping, rolling from changing tables, physical abuse
Toddlers	Falls, motor vehicle accident (MVA), physical abuse
Preschoolers	Falls, MVA, physical abuse
Elementary School Children	MVA, bicycle accident, falls, injuries during play
Adolescents	MVA (including alcohol or drug misuse), sports injuries, assault, risk-taking behaviors

In recent years increasing attention has been paid to sports-related injuries. Although sports- and recreation-related injuries account for 3% of hospitalized persons with TBI, approximately 90% of sports-related TBIs are mild and may go unreported. Sports-related TBI occurs most frequently among people ages 5–24, many of whom will return to public education settings (National Institute of Health, 1998).

Although young people in the 15- to 24-year-old range are most at risk for TBI, children under 15 are afflicted at almost the same rate (Kalsbeek, McLaurin, Harris, & Miller, 1980; Rosen & Gerring,1986). TBI occurs in males at a rate approximately twice that in females. Incidence rates are similar for whites and nonwhites. Motor vehicle accidents and falls are the most common causes for school-age children (Kalsbeek et al., 1980).

BASIC CONSIDERATIONS

Issues of severity

Because the forces responsible for TBI vary significantly, the severity of the injury varies from individual to individual. A convention among medical personnel is to rate TBI as mild, moderate, or severe based on length and depth of coma and duration of post traumatic amnesia. Although common usage suggests that a dichotomy exists between coma and consciousness, reality is better represented as a continuum of degrees of consciousness. A metric frequently utilized to measure the severity of coma is the Glasgow Coma Scale (GCS). This technique grades eye, motor, and verbal responses within the first 24 hours following trauma. Numerical values are assigned to different levels of response, and a total score (15 points possible) is obtained. Lower scores represent a lesser degree of response and are indicative of more severe injury. In addition to providing an indication of initial severity, the GCS is also employed for monitoring change. Post traumatic amnesia (PTA) is defined as the period of time following trauma when the patient is incapable of reliable, consistent, and accurate memory for ongoing events. Under a common classification system, PTA of less than 1 hour is considered mild, PTA of 1–24 hours is considered moderate, PTA that continues from 1 to 7 days is considered severe, and PTA of greater than 7 days is considered very severe. A standard measure of PTA in children is the Children's Orientation and Amnesia Test (COAT) (Ewing- Cobbs, Levin, Fletcher, Miner, & Eisenberg, 1990).

Although ratings of coma and PTA are often employed to provide an estimate of severity of injury and physiological disruption, an important consideration for school psychologists and other school personnel to remember is that they often do not correlate well with future recovery or provide information that is useful in predicting outcome. For example, Savage (1991) cited a study that found many of the children with mild head injury to be experiencing serious problems in a variety of contexts. Also cited were many children with severe injury who, with the exception of motor difficulties, were doing as well as the mildly to moderately injured children. Traumatic brain injury is a complex phenomenon, and recovery is affected by a variety of factors. Other variables such as age, causal agent, extent of damage, site of injury, and quality of rehabilitation all interact to influence outcomes for individuals (Begali, 1992).

A related issue of importance to school psychologists who might work with children with TBI is the concept of "plasticity." This term has been applied to the long-held notion that because children's brains are not completely developed they can recover more rapidly and more completely from brain insult than can adults. Although some evidence does exist that suggests that children may recover language functioning more easily than do adults, there is other research evidence suggesting that trauma to a brain that is incompletely developed prevents the development of a complete and competent behavioral repertoire (Berg, 1986). Age may be an important variable in recovery prospects. Kolb and Whishaw (1996) contended that lesions incurred before 1 year of age produce disproportionately greater impairment than those incurred later. They also contended that lesions incurred between 1 and 5 years of age allow reorganization of brain function, but lesions incurred later than 5 years of age allow little or no sparing of function. Current beliefs about the limits of cerebral plasticity in children argue against complacency in rehabilitation efforts.

Psychological Sequelae/Consequences of TBI

As was discussed above, TBI can vary greatly in severity and the rating of the severity of injury and physiological disruption does not provide a great deal of insight about recovery. The potential often exists for sending children back to school with little if any academic or social support before they have recovered sufficiently. Although apparently well, children who have sustained TBI often experience psychological sequelae (pathological consequences following traumatic insult or disease) that may not be apparent until they are returned to a school setting. Memory disorders are common and persistent psychological consequences of TBI. Problems of attention and concentration as well as problems with language production and processing (e.g., word finding, verbal fluency, reading comprehension, and writing) are also frequently experienced by these children (Begali, 1992). In addition to these cognitive difficulties, psychosocial sequelae such as emotional volatility, anxiety responses, and depression are frequent results from even mild head injury (Frey, 1994).

Educators should also be aware that anticonvulsant medication is often prescribed as a prophylactic measure to reduce the possibility of seizures and that other medications may be prescribed to help manage behavioral excesses. Cognitive side effects that could have an impact on learning may result from these medications. Educators should always know what medications have been prescribed for a child and any possible side effects. School psychologists can play an important role in alerting educators to the possibility of those effects and in monitoring the student's behavior.

A number of physical deficits can also result from TBI. Rigidity of movement, loss of muscular control, weakness, and loss of balance and coordination are not uncommon sequelae of TBI. School psychologists need to be particularly aware of those factors because of their potential impact on assessment results and classroom performance.

BEST PRACTICES

Best Practices in Assessment for Intervention

Because of the varied sequelae that can follow a head injury, broad-based, multidisciplinary assessments are essential in order to make the best educational plans and develop the best educational programs for children who have sustained TBI (Telzrow, 1991). TBI affects each child differently, and any aspect of the child's functioning can be affected. TBI can have an impact on cognitive processes, language, social behavior, and/or sensory and motor functioning. The expertise of a variety of professionals may be needed to develop a comprehensive picture of the child's abilities and needs.

Because post-trauma functioning is often markedly different from pre-trauma functioning, the school psychologist and other school personnel must take care to gather information to allow pre- and post-trauma comparisons to be made. Information regarding pre-trauma functioning, by providing a baseline against which post-trauma behavior can be judged, is important in determining the educational impact of trauma. This information will also allow teachers to understand the source of frustration that many children with TBI display and to incorporate knowledge about any "lost" skills into daily instruction (Madigan, Hall, & Glang, 1997).

Since the likelihood exists that a child who has experienced TBI will not have had a complete psychoeducational assessment prior to injury, this component of the evaluation will focus primarily on a review of the child's educational record and interviews with adults knowledgeable about the child's previous level of functioning. Madigan, Hall, and Glang (1997) provide a brief, 11-item questionnaire to assist in comparing pre- and post-trauma academic functioning and behavior. These authors also stress the importance of information about the speed with which the child mastered therapy skills and how well the child followed directions while in the hospital. Group achievement scores, report cards, anecdotal records, and work samples are additional important sources of data.

A review of medical records and/or interviews with medical personnel and parents can provide valuable information about the severity of the trauma and the overall medical situation surrounding the injury. Moreover, many children will have been evaluated by a hospital psychologist shortly before returning to school. A review of the report and personal contact with the hospital psychologist can also provide helpful information.

In most cases the school psychologist will need to be directly involved with a complete case study evaluation conducted by school personnel. Gerring and Carney (1992) suggest that assessments be completed as close as possible to the date of school reentry because this is usually a time when the child is no longer experiencing rapid recovery of function.

Telzrow (1991) recommends that assessment of children with TBI should include contextual assessment. This includes a focus on "moderator" variables: social, environmental, and motivational factors that influence and affect the child's ability to cope and adjust to the presenting disorder (Ewing-Cobbs & Fletcher, 1990). It is important that school psychologists not ignore these important factors that may not be obvious, but yet may have an important impact on the child's functioning in the school setting. Telzrow (1991), in addition to several other authors (e.g., Ewing-Cobbs & Fletcher, 1990; Obrzut & Hynd, 1990), suggests that school psychologists take a domain-specific approach to the assessment of children who have sustained TBI. This approach involves the identification and examination of several specific areas or domains of functioning. Although the nomenclature varies somewhat from author to author, domains typically specified include intelligence, language, memory and concentration, sensory recognition and perception, academic achievement, and behavior and personality (see Telzrow (1991) for lists of major assessment domains suggested by seven experts or teams of experts).

Although some domains may appear to be only marginally related to performance in school, they may provide information about factors that might interfere with the child's progress. The main focus of the assessment should, however, remain on those factors most closely related to performance in school. An overemphasis on domains may lead school personnel to ignore information directly related to interventions that can improve school performance and to shift their attention to areas of processing deficit that may provide little information useful for intervention.

During the recovery process the child's level of functioning can change rapidly. For this reason, optimal assessment of the child with TBI needs to be periodic and ongoing. This does not mean that a complete psycho-educational assessment needs to be administered on a frequent basis. Indeed, many standardized assessment measures are subject to practice effects and tend to be insensitive to small but important changes in skill level (Kranzler & Shaw, 1992). A methodical system for closely monitoring progress of the child will be important, however. Curriculum-based assessment (CBA) or curriculum-based measurement (CBM) techniques that are designed for ongoing assessment and for measuring discrete changes in functioning can be important tools in assessing and program planning for children with TBI (Kranzler & Shaw, 1992; Cohen, 1996). In addition, CBA and/or CBM techniques can be useful in documenting the adverse impact of the trauma on academic functioning (Shaw & Yingst, 1992) and in helping children and parents understand the need for a gradual and systematic return to school (Ylvisaker, Hartwick, & Stevens, 1991). By comparing performance on post-trauma measures with pre-trauma placement in the curriculum the school psychologist can determine if functioning has deteriorated. Shaw and Yingst (1992) recommend starting the CBA at the place within the curriculum where the child was placed prior to the trauma and testing through progressively lower levels until an instructional level is reached if evidence of decline is apparent.

Regardless of technique utilized, school psychologists who assess children who have sustained TBI need to be alert for signs of the cognitive and behavioral difficulties that are frequent sequelae of TBI. There are, however, several steps that school psychologists can take to surmount this problem. Spreading the assessment over more than one session will probably be appropriate with a child who has difficulty maintaining attention and concentration. "Testing the limits" procedures may also allow greater insight into a child's abilities and skills when test performance is impeded by one of the sequelae discussed above. Information gained through observation and interview methods will be especially important in the assessment of a child whose behavioral limitations interfere with testing and interpretation of results. Kaplan (as cited in Begali, 1994) suggested a process approach to assessment, in which the student's behavior and problem-solving strategies are the focus of assessment rather than conformity to standardized procedures. This approach has been incorporated into the recently published *WISC-III* as a Process Instrument (WISC-III PI; Kaplan, Fein, Kramer, Delis, & Morris, 1999). Finally, utilization of non-standardized measures such as CBA that allow for greater flexibility in administration can be valuable sources of information.

Best Practices in Educational Planning and Academic Consultation

For many children with TBI the first step in the educational planning process is the transition from a medical environment (hospital or rehabilitation center) to an educational environment. The differences in philosophy, outlook, and system structure all too often contribute to inadequate communication and poorly coordinated services. The type and amount of interagency cooperation will depend on the severity of the injury and the length of stay in a medical/rehabilitation facility. Moreover, the return of a student with TBI to a school setting is not a one-time process and may take several weeks. Savage and Carter (1988) identified four steps that are crucial to ensure a successful transition:

1. Involvement of the school-based special education team in the hospital or rehabilitation facility

2. In-service training for all school-based staff who will have contact with the student

3. Short- and long-term planning for the support services needed for the student

4. Continued follow up by the rehabilitation professionals

Ongoing communication between medical and school staff that begins early in the recovery process may help avoid frustration and failure that can result from inappropriate expectations based on inadequate information. School psychologists are especially suited to serve as effective liaisons between schools and medical/rehabilitation facilities. Many school psychologists are knowledgeable about clinical and medical issues and have served as transition facilitator for children who have been hospitalized for psychiatric reasons. Moreover, school psychologists are experts at communicating with children. They can serve the child with a traumatic brain injury by serving as a liaison for classmates and peers as well as adults in the school environment.

Not only is early communication between medical and school staff important, school personnel also need to reach out to the family. Not only is this an ethical step to take, but increasingly authors are stressing the important role that the family plays in the rehabilitation and return to school of children with TBI (DePompei & Blosser, 1994). Early and sustained contact is important because it facilitates the establishment of positive relationships and alliances that will be important for successful reentry. This contact also allows school personnel to develop an understanding of the family's potential for help and to solicit parental input concerning their needs and wishes for their child, and their attitudes toward school and the child's injury. All of these must be incorporated into reintegration plans in order for these efforts to be successful.

Students who make the transition back to a school setting are in the later stages of recovery. Although many of them may be medically stable and display no physical needs, cognitive and psychosocial effects that can interfere with school performance may continue (Gerrin & Carney, 1992). To help school personnel establish appropriate expectations, Begali (1994) listed 20 questions that should be answered prior to re-entry. These included, What was the child's estimated cognitive and educational status before the injury? What are the child's strengths? Which functions remain intact? How long is the child's attention span? Is the child at risk for seizures?

School psychologists who have developed expertise about TBI may also serve the transition process by providing in-service presentations for school personnel. Tyler (1997) provided the following objectives for an awareness-level inservice program:

1. Becoming familiar with federal and state definitions of TBI
2. Developing an understanding of the incidence and causes of TBI
3. Gaining an awareness of the mechanisms of TBI
4. Becoming aware of the recovery pattern of students with TBI
5. Developing an understanding of the immediate and long-term effects of TBI
6. Gaining an awareness of the medical, rehabilitative, and therapeutic interventions students with TBI require
7. Becoming familiar with techniques used to aid in the school reentry of students with TBI
8. Becoming familiar with educational modifications and instructional strategies used for students with TBI

If practitioners do not feel completely competent to conduct an in-service, then prepared training materials, such as those developed by Tyler (1992), can be employed. In addition to the above topics, DeBoskey (1996) suggested that teachers need to be aware of the fact that they will experience emotional and/or behavioral changes as a result of interaction with a student with TBI. Typical negative reactions include over-optimism/unrealistic expectations, frustration, and anger.

Although much of the discussion thus far has addressed issues central to the development of appropriate expectations for returning students, the school psychologist must assist school personnel in addressing questions designed to ensure that interventions are appropriately individualized and likely to succeed. The need for a carefully tailored, truly individualized IEP is paramount. Brain injury affects each child differently. Some children will be only mildly affected and will need only minimal services while others will need both a significantly greater intensity and variety of interventions. School psychologists can help schools engage in Savage and Carter's (1988) step 3, short- and long-term planning, by attending to the questions that follow:

1. What instructional techniques are most likely to be appropriate?
2. What does the student find to be reinforcing?
3. What motivates the student to learn in a sustained way?
4. What kind of rest periods will the student need?
5. What curricular modifications will need to be made?
6. What interventions or accommodations will the student need to help the student cope with residual physical problems?
7. What assistive devices will be necessary?
8. What kind of school/classroom environment will provide the appropriate amount of structure to facilitate learning?

A key concept in the development of an IEP for a child with TBI is flexibility. Students with TBI often make rapid progress in the first few months following their injury. Future performance levels often are not consistent with nor can they be inferred from current levels of performance. Because the student's needs may change rapidly during the early stages of the recovery process, the recommendation has been made (e.g., Savage, 1991; Ylvisaker, Hartwick, & Stevens, 1991) that the initial IEP should be written for a short period of time (i.e., 6–8 weeks) rather than the more customary 1-year period. Because TBI often affects more than academic functioning, it is important that IEPs contain provisions for addressing the child's other needs as well. The IEP must view academic progress as a part of the process of achieving independent functioning and should include provisions to foster the development of adaptive and effective behaviors that will enable the child to meet with educational, social, and vocational success (Roth, Harley, Havey, Probst, & Vaal, 1993). Cohen (1996) advocated a "Who" (the student, education staff, family), "What" (program components), "When" (time of reentry), "Where" (program location: school and classrooms), "Why" (clarification of program adaptations), and "How" (development of techniques to implement the adaptations) approach to program development. Ylvisaker et al. (1991) also assert that the unique characteristics and possible rapid recovery of children with TBI make the ongoing success of their educational programs dependent on careful case management.

The wide variety of outcomes subsequent to TBI mandates that educators consider the complete continuum of services and placements as they plan educational programs for children with TBI. Students returning to school after a brain injury are often at a disadvantage in two ways. Not only have they missed whole units of instruction, but they also are returning with limited functional abilities that reduce the likelihood they can learn at the same pace as they did before their injuries (Gerring & Carney, 1992). These students will need placements that will allow them time to make up what has been missed. They might also require extended time for tests and assignments. Extra time may be required of teachers for repetition and extra assistance. Finally, these students may also need extra time to get from one place to another in the school building (Gerring & Carney, 1992).

Educators need to be flexible and allow for changes in placement as the recovery process progresses. Two areas in which flexible programming can be important include length of school day and length of time in a "regular" education classroom. Many children with TBI become fatigued easily. For many of these children a gradual return to a complete school day might be more appropriate than an abrupt reentry. In addition, as children recover they will need less restrictive educational environments and will be able to spend more time in "regular" classrooms. A structured, self-contained placement that provides close supervision may, at least initially, be most appropriate for the child with a TBI (Gerring & Carney, 1992; Telzrow, 1987). An extended school year may be an appropriate way to provide extra learning time. Blosser and DePompei (1994a) suggested that placement decisions should also be based on considerations of physical, social, and psychological environments most conducive to learning.

They advocated that educators should be mindful of environmental barriers, availability of resources, and classroom structure when making placement decisions.

Teaching methods and techniques that are uniquely beneficial for children with TBI have not been identified, and teaching practices helpful for students with TBI are also beneficial for other students. An approach to instruction that stresses process as well as product has, however, been stressed for students with TBI (Cohen, 1996; Blosser & DePompei, 1994a). This approach is based on the idea that teaching should focus on both products to be completed (assignments) and the strategy needed to complete the task. Students may need instruction in such metacognitive processes as organization, summarizing, and attending and following directions and other skills necessary for success in school. Blosser and DePompei (1994a) also suggested that IEPs may need to contain goals to address potential problems with social interaction and communication. Depending upon individual needs, the IEP may contain accommodations and supplementary aids and/or services to help the child function in his or her least restrictive environment. Kraemer and Blacher (1997) provided a list of suggested accommodations to address the following areas of potential difficulty: attention, orientation, information processing, sensory, organization and planning, memory and learning, reasoning and problem solving, behavior, and motor.

Educational programs based on behavioral instructional strategies also appear to be most successful. Task analysis and systematic progression from goal to goal are key components. Cohen (1996) proposed that by providing clear expectations, frequent reminders, direct instruction, and individualized reinforcers and reinforcement schedules teachers can increase odds for the accomplishment of goals.

Because many children who have sustained TBI require related services as well as modified instruction, an integrated program that provides coordinated instructional and therapeutic services is viewed as preferable to a more segregated approach. One method of ensuring this integrated approach is to deliver related services in the primary instructional setting rather than through a "pull out" design.

Programming for Behavioral and Emotional Needs

Post-traumatic cognitive difficulties can interfere with social as well as academic adjustment. Children who have sustained TBI often exhibit behavioral and emotional problems that can be further compounded by cognitive impairments. School psychologists may, therefore, be called on to provide behavior management consultation or direct counseling as a part of the intervention package for children who have sustained TBI. Although each person who has incurred TBI displays a unique constellation of behaviors, enough commonality exists for Feeney and Ylvisaker (1997) to identify a common clinical picture of a student who appears lazy and unmotivated when not directed by others, may exhibit irritating or explosive behaviors that can be inhibited by neurologically intact students, and does not change behavior in response to the contingencies that are often effective in managing the behavior of peers.

Deaton (1994, 1997) and Feeney and Ylvisaker (1997) stressed the importance of functional analysis in developing behavioral interventions with students who have sustained a TBI. Feeney and Ylvisaker (1997), however, emphasized that because the problem behavior of a child with TBI may be the result of neurologic factors that are unrelated to environmental events, conducting an analysis of the behavior can be very complex. These authors concluded that "in most cases, challenging behavior is a complex mix of preinjury behavior patterns, physiological triggers, reduced initiation or inhibition, and newly learned behaviors" (Feeney and Ylvisaker, 1997, p. 234). Deaton (1994) cautioned that maladaptive behaviors can easily and inadvertently be reinforced because of feelings of over protectiveness, guilt, or pity on the part of adults. Maladaptive behavior can also be reinforced when teachers or parents give in or give up because of fatigue or convenience.

Because of diminished self control and ability to modify behavior in response to feedback, Feeney and Ylvisaker (1997) suggested that behavior programs should focus more on the manipulation of antecedents rather than consequences. They specifically recommended creating familiar routines, reducing frustration by ensuring that tasks can be completed successfully, and allowing students to make choices, thereby avoiding confrontation. They also recommended that the principle of behavioral momentum (i.e., positive and successful behavior increases the likelihood of subsequent positive and successful behavior and negative, unsuccessful behavior has the opposite result) be considered when establishing expectations and making assignments.

Deaton (1997) offered suggestions for specific behavior problems that frequently occur after a TBI. For lack of initiation she suggested that once a target behavior has been identified by the teacher and the student, positive reinforcement and shaping of successive approximations should be attempted. Disinhibition can be addressed by responding to the behavior the same way each time it occurs. If classmates are of sufficient maturity, then they can help with implementation. An aide can also be employed to help monitor and cue the student. Deaton also advised that impulsivity and poor anger control can best be controlled by providing additional environmental cues and structuring the environment by decreasing triggers for anger. Her suggestions for these latter two behaviors are similar to Feeney and Ylvisaker's (1997) emphasis on antecedent manipulation.

Deaton (1997) also offered general suggestions for behavioral interventions with students with TBI. First, collaboration among educator, parent, and student is important. Second, salient and obvious reinforcers should be used at least initially. Third, cognitive and communication difficulties that underlie behavior problems should be addressed. Fourth, care should be taken that expectations and work load are realistic and appropriate.

In addition to the provision of indirect, behavioral consultation services, school psychologists may need to provide direct psychotherapeutic services to the student with TBI. A theme that runs through much of the literature dealing with emotional issues surrounding TBI is "loss." The person recovering from a traumatic injury to the brain is, in many ways, different from the person who sustained the injury. Children who have sustained this type injury may have particular difficulty adjusting to this circumstance because outwardly they may appear to be perfectly normal. A major goal of school psychologists and others who counsel children with TBI should be to help the individual accept the trauma, its consequence, and the new set of circumstances posed by the injury. Deaton (1997) contended that individual counseling is most appropriate with students with relatively intact insight and memory. Deaton (1997) and Begali (1994) suggested that periodically videotaping students may be a useful supplement to counseling because this can provide the basis for insight into the severity of the injury as well as evidence of progress and recovery.

Working With Families and Peers

Although TBI is sustained by individuals, the changes that it causes in that individual's functioning extend its impact to other people with whom the individual with TBI interacts. Nowhere is this impact more obvious and pronounced than within the family. A child's TBI is an intrusive shock to the functioning of a family. The impact of TBI on the family is important to consider because the family is such a vital part of any child's life and because the family's support and cooperation are essential for the child's success in school.

A TBI can leave family members confused and prone to feelings of guilt, sorrow, and anger. Family members are confronted with the fact that the child is not the same as before the injury. Denial is often part of the adjustment process and may continue for months or years. Changes in family dynamics and functioning can compound the stresses associated with adjusting to changes in the child with the injury. Children who require long-term rehabilitation present their families with a different set of responsibilities and demands. The amount of time and energy expended simply transporting the child can be daunting. Adding the new and extra demands for care in the home presented by the child can prove overwhelming. Another source of stress for the parents of a child severely disabled by a head injury is the realization that their responsibility for the child will be ongoing and continue much longer than previously expected. The financial strain of providing for the needs of the child can also be a source of substantial stress. The new circumstances of the family of a child who has sustained a TBI often result in at least some social problems involving isolation, loss of emotional support, and restricted independence (Lezak, 1988). In fact, many couples seek counseling for the problems that emerge from coping with all of the changes in the family (DePompei & Blosser, 1994).

In addition to the stresses and strains encountered by the parents of the child with TBI, specific problems are also associated with being the sibling of such a child. Because parents must focus so much time and energy on the child who has been injured, siblings often feelings of abandonment, guilt over those feelings, and a need for special attention (DePompei & Blosser, 1994). The TBI of a sibling can also bring about changes in the school environment as well. The injured sibling may engage in behaviors that are difficult to understand and that may embarrass uninjured siblings, but which these siblings may feel compelled to defend or explain. Withdrawal and self-imposed isolation, which can be interpreted by parents as a lack of concern, are common reactions. Moreover, the increased demands associated with coping with a child with TBI may prevent siblings and/or parents from participating in typical activities, therefore decreasing social contacts and support.

School psychologists can assist families with their adjustment in several ways. Listening carefully and providing an empathic ear can provide an important service to family members. Oftentimes parents encounter professionals who are so intent on conveying information and directions that they do not take the time to listen to the concerns of the parents. A sensitivity to the stage of the adjustment process of the parents can lead the school psychologist to tailor the presentation according to the needs of the parent at the time. For example, parents who are still in a state of shock may need information to be presented in small amounts and on more than one occasion. On the other hand, parents who are feeling great sorrow at their child's condition may need assistance dealing with feelings of guilt.

The provision of information is an important role for the school psychologist. Parents may need information about potential cognitive and behavioral consequences of TBI and how these might affect school performance. Parents also will likely need information about the school reintegration process and special services. Because the personal and financial demands of caring for a child who has sustained a severe head injury can be so draining, school psychologists can effectively serve by providing parents with information regarding respite care services. Referrals to rehabilitation facilities that operate with sliding payment schedules may help ease the family's financial burden. Hall (1989) offered suggestions that are helpful in working with parents of children who have incurred a TBI. These include giving important news to both parents simultaneously; providing a quiet, distraction-free environment for discussion; allowing ample time for questions; and encouraging parents to bring another adult for support and to reinforce the information provided by the professional.

Their location in the schools and subsequent availability to children provides school psychologists with a unique opportunity to help siblings adjust to their new family circumstances. Serving as a source of information about TBI and its effects can be helpful to many siblings. Others may experience greater adjustment difficulties and require therapeutic intervention. Group counseling may be a particularly effective method of providing support, but the low incidence of TBI may make the establishment of a group difficult.

TBI to a child can also prove disruptive to a classroom environment. Peers are frequently uninformed about the TBI of a classmate. School psychologists can provide an important service by informing children (in accordance with family wishes) of the nature and extent of the injury to their classmate. Communication with classmates should begin early in the recovery process to help dispel rumor and to lay the groundwork for reentry. Children may not understand the extent of injury nor be prepared for the changes that may be apparent in their classmate. As a result, peers may be likely to withdraw and unintentionally isolate the returning child. In addition to providing information and answering questions about the child's injury and its effects, school psychologists can help the reentry process by recruiting peers and school personnel to form a team for the purpose of ensuring social reintegration. Cooley, Glang, and Voss (1997) describe several formal and informal methods to facilitate this process.

SUMMARY

The two key concepts central to effective service to children who have sustained traumatic brain injury are variability and flexibility. Children sustain TBI in any number of ways. Moreover, the effects on the child's physical, cognitive, and behavioral functioning are completely idiosyncratic, and the child's level of functioning can change from one day to the next. Finally, the school and home environments to which children must return following a head injury vary widely. Although some generalizations can be made and guidelines offered, flexibility must be a key principle guiding intervention efforts, and effective service can be provided only by tailoring the efforts of the professional to the needs of the individual student. Despite the fact that the need for flexibility is important when working with all children, it is especially important when working with children with TBI because of the variability of needs among the population and the rapidity with which functioning levels can change.

Another concept important in working with children with TBI is coordination. Because TBI can affect all aspects of children's functioning and development, effective services can only result from the coordinated efforts of representatives of different disciplines. In addition to acknowledging the contributions of a variety of professionals, increasing attention has been paid to the role family members play in the recovery process. Coordinating services and roles can require much effort, but the unique needs of these children can only be met if educators, allied professionals, and family members function cooperatively to carry out the educational program.

School psychologists can play key roles in providing appropriate educational services to these children. One important function that the school psychologist can perform is to ensure that broad-based, comprehensive, and timely assessment provides a valid picture of the child's assets and deficits that can be incorporated into appropriate psychoeducational interventions. School psychologists can also serve the population with TBI by providing in-service presentations about the nature of the disability and the needs of the children to teachers and other educators. Providing ongoing consultation to teachers to help them effectively meet the educational and behavioral needs of these children is another important service that the school psychologist can render. Direct intervention in the form of counseling to help the child with TBI to come to terms with the disability may also be necessary. Finally, school psychologists need to be sensitive to the effects that TBI can have on the family and social environment and provide support for parents, siblings, and peers.

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A useful and informative overview of brain injury and its effects on children. Provides chapters concerning basic brain functions, mechanisms of brain injury, sequelae of brain injury, assessment of children with TBI, and treatment rationale and strategies for educational settings.

Bigler, E. D. (Ed.). (1990). *Traumatic brain injury: Mechanisms of damage, assessment, intervention, and outcome.* Austin, TX: PRO-ED.

The subtitle explicitly states the sections of this edited volume. Although many of the topics of discussion are similar to the Begali book described above, the presentation is more detailed and technical. Early chapters provide excellent photographs of CT scans and actual brains that depict effects of brain injury.

Glang, A., Singer, G. H. S., & Todis, B. (Eds.) (1997). *Students with acquired brain injury: The school's response.* Baltimore: Brooks.

The focus of this edited volume is intervention with children with TBI after they have left rehabilitation facilities and moved back to school. The book addresses educational issues that occur in typical school settings and describes, in some detail, effective school-based educational and behavioral interventions.

Savage, R. C., & Wolcott, G. F. (Eds.) (1994). *Educational dimensions of acquired brain injury.* Austin, TX: PRO-ED.

This edited volume was written specifically for school personnel and contains chapters addressing several aspects of intervention. In addition to chapters of interest to school psychologists, the book contains chapters especially targeted toward teachers, administrators, speech language pathologists, and parents.

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Best Practices in Considering Gender Differences in Providing Psychological Services to Children and Adolescents in Schools

Linda M. Raffaele Mendez
Deanne Gale
University of South Florida

OVERVIEW

It is well known that there are some important behavioral differences between boys and girls (see Maccoby & Jacklin, 1974; Berk, 2000). Research has shown that, on average, boys tend to be more physically aggressive, more competitive, have higher activity levels, and be greater risk-takers than girls, while girls tend to be more empathic, more compliant, more anxious about failure, and more likely to seek help than boys (Berk, 2000). With regard to learning and achievement, girls tend to develop language skills more quickly and show advantages over boys in reading achievement throughout the school years. Boys tend to have better developed spatial skills by middle childhood and begin to outperform girls in mathematical reasoning beginning in adolescence (Berk, 2000).

Whether such differences are biologically based or result from differential treatment is still a matter of debate, although most child development experts would agree that both nature and nurture play a role in producing differences in behavior between the two genders. Regardless of the origin of these differences, it is important that school psychologists understand the unique development and needs of each gender. This chapter will provide school psychologists with an overview of the most important differences between males and females for the practice of school psychology as well as some guidelines to follow in best addressing such differences in providing psychological services to children in schools.

BASIC CONSIDERATIONS

Most school psychology training programs are becoming increasingly aware of the need to infuse diversity into the curriculum. Diversity training often is focused mainly on race and culture, although issues of language, religion, disability, sexual orientation, learning style, and gender are an important part of diversity as well. It is likely that most school psychologists, though aware of differences between males and females, are not well versed in the implications of these differences for practice.

Although certain differences in behavior between boys and girls are to be expected based on differences in biology and deeply entrenched differences in treatment, educational opportunities for the two genders should be similar. Title IX, a federal law passed in 1972, mandates that no person be discriminated against on the basis of sex in any educational program receiving federal funds. Despite the fact that this law was passed almost 30 years ago, there is considerable evidence that gender equity continues to be more of an ideal than a reality (see Bailey, 1993). For the most part, those working in this area have focused attention on the ways in which girls are underserved in schools (e.g., American Association of University Women Educational Foundation, 1992). Frequently noted concerns include girls receiving less teacher attention than boys (Sadker & Sadker, 1994), biased curricular materials presenting women in subordinate roles to men and/or failing to recognize the significant accomplishments of women (e.g., Scott &

Schau, 1985), attitudes toward sexual harassment that accept such behavior as being a normal part of the adolescent school experience (American Association of University Women Educational Foundation, 1993), and stereotypes indicating that girls are less able than boys in mathematics and the sciences (U.S. Department of Education, 1997).

More recent literature has begun to note concerns about boys' educational experiences as well (e.g., American Association of University Women Educational Foundation, 1998; Gurian, 1998; Pollock, 1998). For example, Pollock (1998) noted that boys are more likely than girls to be criticized by teachers for expressing feelings of fear (e.g., on the first day of school) or affection (e.g., hugging another child). Male peers also are likely to chastise boys for any behavior that is perceived as feminine or as being "like a girl" (e.g., boys whose athletic skills are not well-developed might be criticized as "throwing like a girl"). These observations exemplify the fact that although there has been increasing freedom for girls to adopt traditionally male characteristics and interests (e.g., playing physical contact team sports), boys still are restricted by what Pollock calls "the boy code," which stipulates that boys must act tough, independent, and confident even in situations where they feel frightened or unsure. Additionally, Bailey (1993) noted that boys' school experiences do not prepare them well to make contributions (or to think they should make contributions) to the traditionally female tasks of homemaking, childrearing, or community building. And yet, with more than 70% of women currently employed outside of the home, it is clear that men are needed to participate in these activities. It is notable, too, that the fact that so many more boys than girls (particularly African-American boys) experience disciplinary action at school each year may suggest that the types of educational environments currently existing in our schools are not meeting boys' unique educational needs.

With regard to the practice of school psychology, it is important for school psychologists to examine the ways in which they work with students, parents, teachers, and administrators to ensure that they are addressing the unique needs of each gender. Much of what school psychologists can do to enhance gender equity in schools is related to training and education of staff, although an examination of assessment and intervention strategies is important as well. There are three major areas in which school psychologists should be aware of differences between boys and girls in schools: (a) differences in the types of problems experienced and rates of diagnosis, (b) differences in the likelihood of receiving assistance when problems are identified (e.g., in special education programs), and (c) differences in congruency between teaching materials/ methods and how students of each gender learn best.

With regard to the types of problems boys and girls experience, a review of DSM-IV (American Psychiatric Association, 1994) shows that there are clear differences in rates of diagnosis of psychopathology between the genders. For example, boys with attention-deficit/hyperactivity disorder (ADHD) outnumber girls with ADHD by a ratio of 4:1 to 9:1 depending on whether the data are collected from the general population or from a clinic setting (American Psychiatric Association, 1994). Boys also are much more likely than girls to be suspended or expelled from school. A recent study by Raffaele (2000) found that more than 70% of all out-of-school suspensions in one large Florida district were of males. Studies in other communities (e.g., Nichols, Ludwin, & Iadicola, 1999) have reported similar findings. In general, boys tend to be over-represented in externalizing disorders and disciplinary actions. They are far more likely than girls to engage in antisocial behavior or violent crime and/or to be diagnosed with Conduct Disorder (American Psychiatric Association, 1994; Berk, 2000). Boys who are diagnosed with Conduct Disorder also display a different clinical picture than girls with this disorder, with boys engaging in more violent behaviors (e.g., fighting, stealing, vandalism, school disciplinary problems) and girls displaying more defiant behaviors (e.g., lying, truancy, running away, substance abuse, prostitution) (American Psychiatric Association, 1994). Additionally, data from the 1995 U.S. census showed that boys were twice as likely as girls to be identified by their parents as having a learning disability, speech impediment, or emotional disturbance (U.S. Department of Education, 2000b). Boys also are more likely than girls to repeat a grade. In 1995, 7.7% of boys versus 5.3% of girls repeated a grade (U.S. Department of Education, 2000b).

In contrast to boys, girls are more likely to be diagnosed with internalizing disorders, particularly as they move into adolescence. In fact, in childhood, boys and girls are equally likely to experience depression (Nolen-Hoeksema & Girgus, 1994); however, in adolescence, girls are more than twice as likely as boys to meet the criteria for a major depressive disorder or dysthymic disorder (Kashani et al., 1987). One longitudinal study of students assessed in grades 6–8 and again in grade 12 found that girls showed significantly more depressed affect and poorer emotional tone than boys in grade 12, although differences began to emerge as early as grade 8 (Petersen, Sargiani, & Kennedy, 1991). Such a finding is consistent with research suggesting that girls experience a decline in self-esteem in the early adolescent years. For example, Gilligan and her colleagues (e.g., Brown & Gilligan, 1992), through their ethnographic research, noted a tendency for girls transitioning into adolescence to become unsure of themselves, to disconnect from their true feelings, and to fear speaking their minds. They referred to such changes as "losing one's voice." Adolescent girls, in comparison with their male peers, also are much more likely to experience disordered eating (including anorexia, bulimia, and subclinical eating problems) and disturbances of body image (Berk, 2000). Additionally, they are much more likely than adolescent boys to make a suicide attempt (although males greatly outnumber females in completed suicides, primarily because they use more lethal methods) (Lonnqvist et al., 1995). Importantly, the types of problems that girls experience, while clearly detrimental to their development, often do not come to the attention of teachers or other school personnel because they tend not to disrupt classroom activities.

In addition to differences in the types of problems experienced, there also are differences in the frequency with which boys and girls receive intervention to help them deal with these problems. As previously noted, since boys are over-represented in externalizing disorders and girls are over-represented in internalizing disorders, boys' problems are more likely to cause classroom disruptions and thus be brought to the attention of the school psychologist. It has been well documented that there are more boys than girls in special education programs. Recent figures indicate that boys make up about two-thirds of special education students (Jans & Stoddard, 1999). One national report noted that males composed 73.4% of students receiving services for a learning disability and 76.4% of students receiving services for an emotional disturbance (Jans & Stoddard, 1999). Interestingly, a 1998 report by the U.S. Department of Education found that girls in special education programs were identified as having disabilities earlier and scored lower on tests of intelligence than their male counterparts, indicating that girls in special education were likely to have more severe disabilities than boys in those programs (Jans & Stoddard, 1999). Parent reports from the 1995 U.S. census also indicated that 50.4% of boys identified as having a disability were receiving special services at school compared to 39.4% of girls (U.S. Department of Education, 2000b).

Finally, in addition to having an awareness of gender differences in the types of problems experienced and the likelihood of receiving assistance for these problems, it is important for school psychologists to be knowledgeable about differences in boys' and girls' experiences in the classroom setting. Several publications from the early 1990s (e.g., American Association of University Women Educational Foundation, 1992; Sadker and Sadker, 1994) did much to raise awareness of gender inequity in schools. For example, the American Association of University Women Educational Foundation (1992) summarized research indicating that teachers give more classroom attention and more esteem-building encouragement to boys than to girls. Similarly, Sadker and Sadker (1994) noted that boys stand out (receiving both more positive and negative attention than girls), while "girls blend in, do their work, wait their turn, and become the supporting cast" (p. 199). Importantly, when Sadker and Sadker (1994) videotaped teachers in their classrooms and played back the tapes for them, they reported that teachers were "stunned to see themselves teaching subtle gender lessons" (p. 46), indicating that many of the teacher behaviors observed by Sadker and Sadker were not intentional. It is likely that the discrepancy in the way teachers treat boys and girls is related to gender differences in activity level and interactional style, with boys demanding more attention through their behavior than girls. Nonetheless, it is likely that differences between boys and girls in teacher attention could be reduced if teachers were more aware of these issues. Unfortunately, a recent national survey found that pre-service teachers receive little or no training in gender equity (Campbell & Sanders, 1997).

In addition to patterns of interaction between teachers and students, concerns also have been raised about the degree to which current teaching materials and methods are meeting the needs of both boys and girls. It has been widely recognized that girls, women, and people of color are underrepresented in roles of importance in textbooks and other educational materials. Bailey (1993) noted that the majority of lead characters in books read to their classes by elementary teachers are male. She also noted that the books used most frequently in high school English classes are written by men. Others (e.g., American Association of University Women Educational Foundation, 1992) have noted that teaching methods fostering competition continue to be used in many classrooms despite research showing that girls—and many boys as well—learn better through cooperative projects and activities. Of particular concern are teaching methods in science, mathematics, and technology, academic areas in which, by grade 12, girls often have less confidence and enjoy less than do boys (e.g., American Association of University Women Educational Foundation, 1998; U.S. Department of Education, 2000b).

Concerns exist for boys as well. In particular, despite the high level of attention that boys receive in the classroom, girls earn better grades than boys throughout elementary and secondary school (Berk, 2000; Sadker & Sadker, 1994). Whether such grade differences reflect greater mastery of the curriculum across subjects or better behavior in the classroom is unclear. What is clear is that girls show advantages in reading and writing performance compared to their male peers. Results of the 1996 National Assessment of Educational Progress (NAEP) (U.S. Department of Education, 2000a) showed that girls outperformed boys in reading and writing at the elementary (grade 4), middle (grade 8), and high school (grade 12) levels. On the other hand, boys outperformed girls in mathematics in grades 4 and 8, although—in contrast to scores from previous years—the performance of boys and girls was similar in grade 12. Boys and girls also were equally likely to score at the highest levels (at or above 300) on the NAEP in mathematics, although boys were more likely than girls to score at this level in science. Research has shown as well that boys are more likely than girls to take the three core science courses in high school (biology, chemistry, and physics) and to aspire to careers in the sciences or engineering (U.S. Department of Education, 1997).

Additionally, with regard to differences in boys' and girls' experiences in the classroom, it is important to consider the research on sexual harassment in schools. One survey (American Association of University Women Educational Foundation, 1993) found that 85% of girls and 76% of boys in grades 8–11 indicated that they had experienced "unwanted and unwelcome sexual behavior that interferes with their lives" (p.7) while at school. This behavior included sexual jokes, comments, gestures, or looks; touching, grabbing, or pinching in a sexual way; being forced to do something sexual at school other than kissing; and having their clothes pulled off or down. Another survey found that 39% of girls reported being harassed at school on a daily basis (Wellesley College Center for Research on Women, 1993). Outcomes of harassment reported most frequently by students included not wanting to go to school; not wanting to talk as much in class; finding it hard to pay attention in school; feeling embarrassed, self-conscious, or less confident; avoiding particular people or places at school; avoiding particular activities or sports; and changing one's group of friends (American Association of University Women Educational Foundation, 1993). Gay and lesbian youth report even higher rates of harassment and are much more likely than heterosexual youth to make a suicide attempt (see Henning-Stout, James, & Macintosh, 2000).

BEST PRACTICES

In order to assist in minimizing gender bias in schools, it is important first for school psychologists to be aware of the unique problems confronting boys and girls in the education system. Taking action to alleviate these problems involves (a) assuming a consultative role in helping to raise awareness of these issues among others in the school system (including administrators, educators, students, parents, and the larger community) and (b) making changes in one's own practice to assure that decisions that are made reflect an understanding and appreciation of the unique needs of each gender. In this section, we discuss best practices in considering gender in three critical areas of the practice of school psychology—prevention, assessment, and intervention.

Prevention

School psychologists can do much to prevent common problems for both girls and boys by helping school personnel to design learning environments that are sensitive to the needs of each gender. This work, the majority of which will be done at the systems level through consultation, in-service training, and participation on school planning teams, includes addressing issues in (a) the curriculum, (b) behavior management, (c) school climate, and (d) classroom dynamics and instructional styles.

THE CURRICULUM

To begin with the curriculum, it is important that educational materials used in schools (e.g., textbooks, posters, media, Internet resources) represent the diversity of the human experience. In terms of gender, this includes depicting both men and women of various ethnic and racial backgrounds in positions of leadership and achievement. Students should have the opportunity in schools to learn about the important contributions that both women and men have made to society and to see depicted in their educational materials role models who help them to envision possibilities for themselves that defy gender role stereotypes (see Denmark, 1999). This might include, for example, watching a video of a science experiment conducted by a woman or reading a book about a man who gave up his job to care for his infant. It also includes balancing the number of books or other educational materials created by men and women as well as the gender of the strong central figure in these materials. School psychologists can affect the decisions teachers and administrators make about educational materials through in-service presentations that bring the importance of these issues to their attention. Resources that might be incorporated in preparing such an in-service include Roberts (1993), Horgan (1995), and the American Association of University Women Educational Foundation (1998). Other materials are readily accessed on the Internet by searching under the term "gender equity."

At the middle and high school levels, it is particularly important for schools to find proactive ways to address the problems of teenage pregnancy, sexual harassment, and sexual violence (see American Association of University Women Educational Foundation, 1998). These are concerns that many school administrators (and parents and teachers as well) do not believe should be discussed in schools. Nonetheless, research demonstrating the disproportionate negative impact of these issues on young women's schooling experiences is cause for concern. For example, although the average high school completion rate for girls in 1998 was 94%, girls who gave birth prior to their senior year of high school had a graduation rate of only 54% (U.S. Department of Education, 2000b). Unfortunately, research has shown that girls who drop out of school are less likely than boys to return to finish their education or to earn a GED (American Association of University Women Educational Foundation, 1998).

BEHAVIOR MANAGEMENT

It has been noted that boys are greatly over-represented in school disciplinary actions. Thus, in order to meet boys' unique needs, it is very important, from a preventive standpoint, to put in place behavioral strategies that attempt to curtail disruptive classroom behavior. Most school suspensions—which have a disproportionate impact on boys—are for classroom disruptions and disobedience (Raffaele, 2000; Rosen, 1997). Research summarized by Kay (1999) has shown that such behaviors can be reduced through preventive programs that involve positive behavior management, social skills instruction, a unified discipline approach (involving partnerships between schools, families, and communities), and shared expectations for socially competent behavior. As an example, Project ACHIEVE (Knoff & Batsche, 1995), a comprehensive school reform process involving building-wide in-service training in and implementation of problem-solving assessment and intervention skills (including classroom-based social skills training), was shown to significantly decrease discipline referrals to the office (both from the bus and the classroom) and student suspensions over a 3-year period. School psychologists can take a leadership role in helping administrators to select programs that meet the needs of their particular schools and to design evaluation strategies to determine the degree to which such programs are successful. Examples of other promising programs can be found in Kay (1999).

SCHOOL CLIMATE

With regard to school climate, there are a number of gender-related issues to be considered. The most important of these are specific programs and policies that (a) reflect a valuing of individual differences and encourage each student to develop his or her strengths independent of traditional gender role stereotypes, (b) foster a sense of belonging among both boys and girls, and (c) provide protection for students against gender-related forms of discrimination, harassment, and violence.

There are many ways for school administrators to reflect to students, staff, and the larger community that students at their school will not be limited by traditional gender role stereotypes. Decisions about the curriculum have been discussed above. Other strategies involve developing nontraditional career-mentoring programs, providing similar levels of financial support for girls' and boys' athletic teams, and establishing awards programs that recognize (a) teachers for excellence in promoting gender equity and (b) students for significant accomplishments in areas traditionally considered to be more appropriate for the opposite gender (e.g., girls in science or math, boys in writing or the arts).

School psychologists can help administrators to become aware of areas of inequity through conducting an analysis of issues on gender (see Sheridan & Henning-Stout, 1994). For example, interviews, observations, and record reviews can be employed to examine issues such as the percentage of boys and girls in special education programs (including gifted programs), communication patterns among staff, and bias in curricular materials. The findings of the analysis then can be shared with the school staff. Sheridan and Henning-Stout (1994) noted that awareness of inequity often is enough to incite a change in practice. However, when it is not, school psychologists should be prepared to address the staff's resistance to change and be aware that depending on the degree to which the stereotypes are imbedded, school-wide change in attitudes and practices may be slow.

As for fostering a sense of belonging among both boys and girls, it is important to consider the consistency between gender-specific developmental needs and the day-to-day operation and management of the school. Henry (1996) has criticized U.S. schools for operating according to rigid bureaucratic structures that give little importance to the development of positive, caring, collaborative relationships among people. Although this clearly is not the case in every school, it is true that many schools—particularly at the middle and high school level—are large and impersonal. Given the findings of Brown and Gilligan's (1992) research on the importance of relationship in girls' development, it must be questioned whether such a learning atmosphere is consistent with the needs of girls (and boys for that matter, as well). Approaches to school reform that emphasize an ethic of care (see Noddings, 1992) seem to have the potential to meet the needs of both girls and boys for acceptance and belonging. School psychologists should become familiar with this approach to school reform (see Baker, Terry, Bridger, & Winsor, 1997, for a recent review) so that they can assist administrators and teachers in applying these principles to enhance the climate of schools.

Finally, to provide protection for students against gender-related forms of discrimination, harassment, and violence, it is important for school psychologists to be aware of the frequency of these types of behaviors in their schools and to help school staff develop appropriate strategies for dealing with them. All schools receiving federal funds are required to have a written policy prohibiting sexual discrimination. School psychologists should be familiar with the particular policies at their schools. Although not required by Title IX, it also is recommended that schools have a policy prohibiting sexual harassment. School psychologists whose schools do not have such a policy may help to develop it. It is particularly important that this policy include student-to-student sexual harassment given the findings of the 1993 American Association of University Women Educational Foundation study. Guidelines for developing a student-to-student sexual harassment policy can be found in Webb, Hunicutt, and Metha (1997).

CLASSROOM DYNAMICS/INSTRUCTIONAL STYLE

Finally, school psychologists, in their role as consultants, can help to educate teachers about gender equity in classroom dynamics and instructional style. For example, Sheridan and Henning-Stout (1994) suggested that school psychologists can (a) educate teachers about the truths and myths of gender differences (e.g., boys are *not* inherently better at math and science than girls), (b) train teachers directly in gender-fair teacher-student interactional practices (e.g., through modeling and/or role-playing gender-fair expectancies, practices, and attitudes), and (c) observe and provide feedback on the degree to which teachers are engaged in gender-fair teaching methods and strategies.

According to Sheridan and Henning-Stout (1994), when modeling is ineffective with a teacher, it may be necessary for the school psychologist to address the teacher's attitudes and beliefs. This can be done through direct or indirect confrontation and/or reframing. As an example of confrontation, the school psychologist might share with the teacher data he or she has collected through an observation (e.g., the teacher responded to 80% of the boys with raised hands and only 20% of the girls with raised hands). These authors caution that this approach should be attempted only after the school psychologist has already established a trusting relationship with the teacher. A more subtle approach is reframing. Using this strategy, if, for example, a young girl is struggling with math and the teacher attributes this to girls' inherent inability in math, the school psychologist could reframe the young girl's difficulty as due instead to possible environmental or curricular factors such as biased texts or different societal expectations.

Assessment

In addition to assisting school personnel to better understand gender differences, it also is important for school psychologists to examine their own practice. With regard to assessment, it is notable that the rates of diagnosis of academic, emotional, and behavioral problems differ by gender (see Basic Considerations). While this may reflect biological differences between the genders (e.g., the two X chromosomes in females appear to protect them against some genetic disorders) or differences in behavioral expectations for boys and girls, the possibility also exists that such differences stem from biases in the referral and/or assessment process (i.e., how problems are conceptualized and/or how they are measured).

It is clear that, in schools, problems that cause disruption in the classroom are those that are most likely to be recognized and further assessed. Thus, the fact that boys demonstrate more externalizing behavior problems while girls demonstrate more internalizing behavior problems means that boys' problems come to the attention of teachers more often than girls'. Boys are thus more frequently referred to the school psychologist for assessment. For example, one problem in boys that tends to be responded to frequently is aggression. Historically, aggression has been conceptualized as including physical or verbal attacks, such as hitting, kicking, cursing, and yelling. Such behaviors are significantly more common in boys than in girls (Berk, 2000). Until recently, it was believed that girls were less likely than boys to engage in aggressive behavior (e.g., Maccoby & Jacklin, 1974). However, in recent years, research conducted by Crick and her colleagues (see Crick & Rose, 2000) has shown that, if aggression is defined as the intent to hurt or harm, boys and girls are equally likely to engage in aggressive acts, albeit of different types. The type of aggression in which girls are more likely to engage is relational aggression, which includes acts designed to damage the victim's personal relationships (e.g., spreading rumors, threatening to dissolve a friendship if the victim does not comply with a request) (Crick & Rose, 2000). Relational aggression has been shown to result in negative consequences for both victims and aggressors, including low peer status, difficulty with peer relations, anxiety, and depressed affect for victims (Crick, 1996), and immediate peer rejection, increasingly less acceptance from peers over time, and future social maladjustment for aggressors (Crick, Casas, & Ku, 1999). Unfortunately, relational aggression is less likely than physical aggression to be recognized in the classroom because it is more covert. As a result, children who engage in relational aggression are less likely to be identified as having a problem, receive further assessment, or—most importantly—be targeted for intervention.

Relational aggression is just one example of gender bias in the types of problems that are conceptualized as requiring further assessment from the school psychologist. Others include learning problems that occur in the absence of behavioral problems, depression, and eating disorders, all of which are more common in girls. School psychologists need to help teachers and administrators become more aware of the types of problems that girls experience, the warning signs associated with these problems, and the necessity of involving members of the student support team in intervening with girls in these situations.

In terms of how problems are assessed and diagnosed, it is important to consider whether the instruments that are administered to understand children's functioning are biased against either gender. At the level of the test, some of the questions to be addressed in determining if a measure is appropriate for both genders are (a) *Were boys and girls equally represented in the normative sample?* (b) *Have girls and boys been shown to obtain similar average scores (where it is expected that they would be similar on the construct being measured)?* and (c) *Has the instrument been shown to be equally reliable and valid for girls and boys?* Most of the major cognitive assessment instruments currently used by school psychologists (e.g., WISC-III, Stanford-Binet: FE, Woodcock-Johnson Tests of Achievement-III) provide evidence in their manuals that similar numbers of boys and girls were included in the normative sample. However, few test manuals provide evidence of similar average scores across gender or report reliability or validity by gender. The technical manual of the Stanford-Binet: FE does show that boys and girls in the normative sample obtained similar average scores on each of the scale's factors. But not all intelligence test manuals report this information. In fact, several investigations have found boys to score significantly higher than girls on the Wechsler scales. For example, Quereshi and Seitz (1994) found that, in their sample of 72 children selected from nine elementary schools, boys scored an average of 8.8 points higher than girls on the Verbal Scale score of the WPPSI-R. Similarly, in examining scores on the WISC-III, Slate (1998) found that among 366 students who had been referred for special education testing but did not meet eligibility requirements, boys scored an average of 4.0 points higher than girls on the Verbal Scale score and 5.7 points higher than girls on the Full Scale score. These differences in average scores are particularly notable when one considers that relatively small differences on measures of intelligence often determine the outcomes of major educational decisions (e.g., special education program eligibility).

In addition to looking at measures of intelligence at the level of the test, one also can examine gender bias in tests at the item level. Differential item functioning (DIF) provides a means for determining whether particular items on a measure are of equal difficulty for boys and girls who are similar on the construct being measured (e.g., intelligence, self-esteem). Very few of the major assessment tools that are currently being used by school psychologists have been examined for gender DIF. The few studies that do exist (e.g., Maller, 1997) indicate that this is an area in which more research is needed. Additionally, more research is needed on the gender-related predictive bias of frequently used measures of intelligence and achievement. One recent study found that Curriculum-Based Measurement (CBM) over-predicted reading comprehension (as measured by the California Achievement Test) for fifth-grade girls and under-predicted reading comprehension for fifth-grade boys (Kranzler, Miller, & Jordan, 1999). Glutting, Hyeon-Joo, Ward, and Ward (2000) also reported evidence of bias against boys in using the Verbal, Performance, and Full Scale IQs from the WISC-III to predict Reading, Mathematics, Language, and Writing Composite scores on the WIAT. Although definitive conclusions cannot be drawn from these few studies, school psychologists should be aware of these issues, stay abreast of research in this area, and be aware of potential gender bias in the measures they use.

Designing norm-referenced measures to assess the severity of behavioral problems equally well in females and males also has proven to be a formidable task. Most behavior rating scales use separate norms for females and males to reflect differences between the genders in the severity of various behaviors. Recent investigations have supported such an approach (e.g., DuPaul et al., 1997; Reid at al., 2000). For example, Reid et al. (2000), using the ADHD-IV Rating Scale, found that although the same two-factor model of ADHD (i.e., Hyperactivity/Impulsivity and Inattention) held across gender, there were significant differences between teachers' ratings of the severity of symptoms among girls versus boys. Boys were rated as having more severe symptoms than girls. This finding was true across both the Caucasian and African-American samples, although gender differences were larger in the Caucasian sample. School psychologists should be aware that behavior rating scales frequently show significant differences between boys and girls in the normative sample and should supply separate norms for each gender when such differences are found.

Behavioral measures also can be examined at the item level, and several investigations of gender DIF in behavioral measures have been conducted. For example, Brown, Greenbaum, and Maller (1998), who examined the Teacher Report Form of the Child Behavior Checklist, found that, when rating boys' behavior, teachers were more likely to endorse statements describing overt externalizing behaviors (e.g., destroying property, clowning around). In contrast, when rating girls' behavior, teachers were more likely to endorse statements describing covert externalizing behaviors (e.g., easily jealous, moody). Such findings are consistent with Crick's work (e.g., Crick & Rose, 2000), which suggests that girls and boys demonstrate aggressive behavior in different ways.

The findings of the Brown, Greenbaum, and Maller study (1998) in combination with Crick's work (e.g., Crick & Rose, 2000) suggest that gender-specific measures of aggression may be more appropriate than those that are currently used. Notably, when measures that conceptualize problems in a way that is more descriptive of one gender than the other (e.g., aggression = physical aggression) are used, problems may fail to be detected when they truly do exist. As an example of this, Henning-Stout's (1998) qualitative review of the Child Behavior Checklist, the Social Skills Rating System, and the Behavior Assessment System for Children found that none of these instruments addressed concerns for girls often noted in the literature, including a tendency to question the validity of one's own perceptions, the impact of interpersonal crises on daily functioning, vulnerable sexual boundaries, pregnancy history, and exploration of sexual identity. Additionally, Henning-Stout noted that particular items on behaviors presumed to be positive (e.g., tries to bring out the best in people) might, in some girls, actually be maladaptive if they are associated with girls' compromising their own thoughts and desires to be pleasing to others (see Brown & Gilligan, 1992). Further work in this area is necessary to understand what is missed—such as problems with vulnerable sexual boundaries or relational aggression—when assessment instruments that do not include the experiences of historically marginalized groups are employed. In the absence of norm-referenced measures to detect these types of problems, school psychologists should be cognizant of gathering such information through interviews and observations of the student.

It is important, as well, for school psychologists regularly to engage in assessment activities that help to detect mental health problems among youth that may not come to the attention of classroom teachers. For example, Stark (1990) described a multiple-gate assessment approach for detecting internalizing disorders among children in the schools. This approach involves screening large numbers of children with a paper and pencil measure and then following up with children who twice score above a cutoff point with a clinical interview, such as the Schedule of Affective Disorders and Schizophrenia for School-Age Children (K-SADS). Upon screening 720 elementary-aged children with a paper and pencil measure of depression, Stark found that 77 scored above the cutoff point twice. Follow-up interviews with the K-SADS found that 33 of these children met DSM-IV diagnostic criteria for a depressive disorder. These children were then targeted for intervention. Such large-scale screenings—which do require prior parent permission—could be introduced to detect other mental health problems that may not be easily recognized in the classroom, including eating disorders and other internalizing problems.

Intervention

The intervention activities in which school psychologists are involved also are informed and enhanced by an understanding and appreciation of gender differences. In particular, gender has implications for (a) individual and group counseling with students, (b) the design and monitoring of academic and behavioral interventions, and (c) recommendations for special education placement and educational programming.

In counseling students, it is important to recognize that there are gender differences in the degree to which boys and girls feel comfortable sitting down with an adult to discuss their thoughts and feelings. Pollock (1998) noted that boys have been socialized to believe they should handle their problems on their own rather than reach out to others for help. Additionally, it is common for boys to "feel it is necessary to cut themselves off from any feelings that society teaches them are unacceptable for men and boys—fear, uncertainty, feelings of loneliness and need" (p. 5). As a result, it is less likely that boys, as compared to girls, will enter the counseling process prepared to share their innermost thoughts and feelings. This may be particularly true when the school psychologist is female and/or of a different racial background. Pollock's (1998) research suggests that, in counseling situations, boys may feel more comfortable focusing on an activity (e.g., counseling games, role plays) and having discussions of thoughts and feelings arise out of the activity rather than simply being asked to share what is on their minds.

In group counseling, it is important to consider whether single gender or mixed gender groups are most appropriate. This will vary depending on the nature and purpose of the group. Elementary aged children are more likely than adolescents to feel comfortable in mixed gender groups. Adolescents may prefer same gender groups, particularly when issues related to relationships or sexuality are a focus of the group. When mixed gender groups are used, school psychologists should be aware of giving equal attention to boys and girls and not allowing children of one gender to dominate the discussion (see Sadker & Sadker, 1994). In mixed gender groups, it also is important not to allow gender-stereotyped statements to go unchecked and to recognize that differences in boys' and girls' communication styles may need to be explored with the group openly to facilitate the most productive interactions.

School psychologists should exercise caution in assuming that interventions that are successful with one gender will be successful with the other gender as well. Research by Kavanagh and Hops (1994) supports the notion that there is a need for further research to investigate how gender affects the likelihood of success of behavioral interventions. These authors found that although parent training was effective for adolescent boys with externalizing disorders, peer training was more effective for girls. They noted that most of the research examining interventions for children with externalizing disorders has been conducted with boys. Importantly, these authors emphasized that the social-interactional context of the student's development must be considered in designing interventions. Thus, for example, because girls are likely to have more difficulty than boys in establishing independence from their parents in adolescence (because parents typically allow boys greater independence earlier in life) and because females are more likely than males to experience separation as a hostile act (Brown & Gilligan, 1992), it may be particularly important for family-based interventions with adolescent girls to include training in conflict resolution. Considerably more research is needed in this area to guide gender-specific intervention strategies.

It also is important to consider the gender of the student in making decisions about educational placement. Because boys with emotional or behavioral disorders greatly outnumber girls in the special education system, a problem that arises in this area is the dilemma of placing a girl with an emotional or behavioral disorder into a special education class that is composed mainly of boys. Within such a classroom, girls have limited opportunities to develop friendships with other girls and may be more likely to be subject to harassment. Similar concerns arise in placing girls in alternative education programs or centers (e.g., as an alternative to expulsion) in that these programs often are dominated by boys. There is a considerable amount of research showing that youth naturally gravitate toward same-gender friendships (see Maccoby, 1988). Placing students in classrooms that do not contain many students of the same gender should be done with considerable caution. This is particularly true when a girl with an internalizing disorder is being considered for placement in a classroom composed mainly of boys with externalizing disorders. If other accommodations are feasible, then these should be attempted first. Interestingly, Minnesota (see Ryan & Lindgren, 1999) has developed an all-girls program for adolescents with emotional or behavioral disorders who spend more than 60% of their day in a special education setting. The program, referred to as UNITE, incorporates a number of gender-specific practices including a relationship-based approach (versus a highly structured token economy), a strengths-based model for developing personal goals and objectives, and a procedure for resolving problems and conflicts with restorative measures to re-establish connections (as opposed to traditional punitive measures). This program provides an excellent example of how research on gender can be used to directly inform program development.

Finally, when making recommendations for programming, it is important to think beyond traditional stereotypes. This is particularly true in the area of vocational programming. Despite many efforts to expand nontraditional vocational programming for girls, most high school girls enrolled in vocational education programs are in one of a few traditional areas of study (e.g., hairdressing) (American Association of University Women Educational Foundation, 1998). Girls need to be educated that male-dominated vocational areas (e.g., construction, mechanics) tend to be higher in pay than female-dominated vocational areas and that women can be successful in these areas as well. This is particularly important when one considers that young women in special education programs, upon graduation, have been found to be less likely than their male special education peers to be employed or to enroll in postsecondary training or education. Those who are employed earn lower wages than their male special education peers (U.S. Department of Education, 1998).

SUMMARY

This chapter has summarized best practices in considering gender in providing psychological services to children and adolescents in schools. As noted, school psychologists' greatest opportunity to assist schools in meeting gender-specific needs is through raising awareness of the most important issues in this area among administrators, teachers, parents, students, and the larger community. These include differences in the ways girls and boys are treated in the classroom, the degree to which the types of problems they encounter are recognized and treated, and the sensitivity of the school environment to their particular needs. School psychologists also must consider their own practices in assessment and intervention. In particular, they need to be reflective about the types of problems that are most likely to be referred to them (and what types of problems are not referred to them), the degree to which the assessment instruments they use are sensitive to problems and issues faced by both genders, and the extent to which their intervention strategies take into account the needs of boys and girls as documented in the research literature. Greater consideration of gender issues in practice can help school psychologists to create and nurture school environments that encourage all students—regardless of gender—to achieve their personal best.

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91 Best Practices in Assisting Relocating Families

Frederic J. Medway
University of South Carolina

OVERVIEW

This chapter provides a framework and a description of the best professional practices for school psychologists to follow in order to aid students and families faced with relocation. The chapter will clarify the impact of relocation on children and their parents, and provide guidelines and resources for intervention. The chapter examines the concept of mobility, describes variables associated with a family move, and presents research on the effects of moving on indices of children's adjustment. Finally, ways that school psychologists can help reduce the potential negative effects of family mobility on children are considered.

Background

Yearly approximately 16% of American families and nearly 9 million school-age children change residence (U.S. Census Bureau, 2000). Although the percentages of families changing residence has declined about 3% in the past 30 years, the total number of individuals moving has increased. Mobility is most likely to affect families of preschool children, families facing divorce and separation, and military families. The latter relocate as often as every 2 years. Mobility rates are particularly high (21.2%) among people of Hispanic origin.

Sixty-three percent of relocating families stay within the same county (van Vliet, 1986; U.S. Census Bureau, 2000). However, the primary impact of residential mobility is not so much a function of the distance moved but rather whether an increase or decrease in family income or change in family composition precipitates the move. Residential moves are made by both those who seek larger or more luxurious housing and by those forced to move because of economic circumstances including family separations and job loss. Even a move of relatively short geographical distance can be associated with a significant life change. For children, these moves can involve changes in children's familiar surroundings including their school. About one in six moves are to a different state or country. A number of occupations such as sales, the clergy, government service, and the military often require frequent relocation. Family migration also characterizes migrant families. Some individuals relocate many times just during their school years alone. Norford (1991) found that 5.5% of more than 7,000 high school students surveyed had moved seven or more times.

Even one act of relocation places many demands and challenges on individuals. It is difficult to leave friends, family, and familiar environments, and develop new relationships. Feelings of anxiety, loneliness, a sense of loss, and uncertainty are common. For children, these worries typically involve losing friends and making new ones (Norford, 1991). This is true throughout the school years. A stable reference group of friends serves many important functions, such as aiding in the formation of self-concept, providing feedback on one's abilities, and providing opportunities for positive socialization.

Research conducted up through the mid 1950s concluded that high residential mobility was associated with suicide, homicide, juvenile delinquency, and mental health problems. However, the more recent literature reviews conclude that moving per se is not necessarily problematic. Children who are well adjusted prior to relocating tend to be well adjusted after relocating. Additionally, children with academic or adjustment deficits preceding a move tend to be at risk for similar or greater problems after a move (DeWit, Offord, & Braun, 1998; Tucker, Marx, & Long, 1998). If anything, the evidence shows that there is considerable variability in how families handle relocation (Cummings, 1999).

In summary, as will be documented subsequently, there is little evidence to support the widely held belief that moving has negative effects on *average* children. This belief is based on case study reports, clinical impressions, and methodologically flawed studies (e.g., small and selected samples, lack of experimental controls). It further is compounded by media accounts of moving as "traumatic" for children, and numerous well meaning self-help books (e.g., Dickinson, 1983; Olkowski & Parker, 1993) with tips to deal with moving related problems in children. Although exaggerated fears regarding the negative effects of mobility on children have been challenged before (Goldsmith & Clark, 1987), school professionals continue to be unduly concerned about the unpleasant side of relocation. This chapter examines relocation as a family transition process and provides suggestions for increasing the probability that the transition will be a smooth one.

BASIC CONSIDERATIONS

The Process of Moving and Relocation

There is general consensus that family relocation should be considered as one of many life transitions and adjustment situations faced by children. With this view, relocation potentially can have either positive or negative effects on families and, in most instances, involves some combination of the two. Those effects can be short-term and transient or long-term and affect behavior patterns for a number of years. The impact of mobility may be associated with the geographical, social, and environmental changes faced by children, or the effects on children may be mediated by changed behavior patterns of parents and caregivers and how they deal with relocation. Most likely, the impact of a relocation experience reflects the family's adaptability (DeWit, Offord, & Braun, 1998; Tucker, Marx, & Long, 1998) in conjunction with the number of times a family has faced this potential stressor. There also is general support for the notion that moving is not a discrete event but rather involves a series of stages and challenges facing families from the time that relocation becomes an option to the time that the family is fully settled in a new environment. Each of these stages may demand adjustment and, accordingly, at each stage, there are opportunities for school psychologists to provide assistance. These stages are described below and the accompanying school psychological intervention opportunities described in the concluding section of this chapter.

Stages of Family Relocation

STAGE ONE: ANTICIPATION AND PREPARATION

This stage involves families facing a potential relocation, and weighing the advantages and disadvantages of it. This stage involves all aspects of initial decision making regarding relocation (possibly including solicitation of the child's input), parents' attitudes, and ultimately communication of the decision to the child. Early research confirmed the public's view that many children are unhappy, sad, or scared when they learn that they may have to move (Khleif, 1978). Children typically focus on the negative side of moving and minimize the positive aspects. This is especially true of children in elementary school who have great difficulty considering themselves in a new community and with new friends. Thus, an essential first step to ease the anxiety of children is to be reassuring, to clearly explain the reasons for the move, and to be optimistic and positive about the benefits of relocation. Many of the books and resources about moving targeted for children that are listed at the conclusion of this chapter can be very valuable in dealing with children's initial apprehension.

STAGE TWO: PLANNING

This stage involves all actions necessary to change the physical environment with the least amount of personal distress. This may involve elements related to house sale, selection of neighborhoods and schools, inquiries about community resources, and transfers of school records. Without proper planning parents may feel irritable, overwhelmed, and fatigued. Those feelings often affect child behavior.

STAGE THREE: MOVING DAY

Moving day is characterized by the actual geographic transportation of the family and its possessions. Since three out of four families move without the help of relocation professionals, this day can be highly stressful and physically exhausting. Young children may be particularly upset during this time as they watch prized possessions loaded by strangers on a moving truck.

STAGE FOUR: INITIAL ADJUSTMENT

This stage, lasting upward to 6 months, is characterized by those actions taken by the family, child, and community resources to deal with the stresses associated with environmental change. This may involve increased financial responsibilities, securing new employment for family members, and adjusting to changing work or travel schedules of the employed adult(s). Families hope that the child's behavior in the new home, school, and neighborhood will be similar to (or in some cases better than) the prior location. There is little disagreement among clinicians and researchers that initial adjustment difficulties are normal and expected.

STAGE FIVE: LATER ADJUSTMENT

This stage involves the impact of a move or series of relocations on individuals usually after an initial period of adjustment lasting 6 months to a year.

Many families feel relatively well equipped to deal with Stages Two and Three. Some are ably assisted with these issues by their employers and by relocation specialists. By contrast, Stages One, Four, and Five have been the concern of social scientists.

Mobility Dimensions

Beyond acknowledging that moving represents a series of activities and subsequent adjustments, it is important to recognize that the events themselves vary dramatically from one moving situation to another. For example, a military move from one base to another, although *superficially* similar, can involve considerable adjustment. Family moves vary on different dimensions, and each of these, either singly or in combination with others, will influence moving-related reactions. These dimensions are presented in Table 1. Each of these can have an impact on various aspects of children's social adjustment, including their peer relations and friendship networks, participation in social activities, mental health and anxiety, self-concept, age-appropriate behavior, loneliness and susceptibility to depression, and school performance.

Mobility Characteristics

Several variables associated with the move itself have the potential to impact directly on children although not all have been subjected to research scrutiny. Three important and researched characteristics are the distance moved, the degree of perceived choice, and the

Table 1. Variables associated with family mobility

Mobility Characteristics

- Distance of move
- Timing of move
- Degree of choice in move
- Reason(s) for move
- How recent was the move
- Cultural similarity between old and new community
- Number of prior moves
- Pattern of prior moves

Child Characteristics

- Age
- Gender
- Personality
- Preexisting achievement or adjustment problems

Family Characteristics

- Family size
- Family support mechanisms
- Family structure
- Family mobility history
- Family attitudes about moving
- Availability of parents

School Factors

- Time of entry into classroom
- Curriculum
- School size
- Amount of student turnover
- Programs to address relocation and other support services
- Degree of student grade retention

Community Factors

- Availability of child and family social services
- Availability of community supports
- Economic climate

reason for the move. Although distance as measured by miles from old to new residence has little consistent impact on children, it must be recognized that even short moves can potentially exaggerate existing problems if they involve significant life changes such as an extended commute or a school change. Moving usually is hardest on family members who have had little say in the decision to move as well as those with minimal choice of new community, including the new house and school. Typically, this describes young children and even spouses in corporate and military families. Transplanted spouses are likely to experience loneliness, depression, and feelings of loss. These feelings may affect their attitudes toward the move and their actions in relation to their children. In short, moving often affects children because primary caregivers become less functional in carrying out parental roles. In some households the relocated spouse may attempt to use the child as emotional support to deal with their own loneliness and discomfort.

Research also shows the important role of the reason for the move. Families may move because of financial hardship, the requirements of military duty, separation, or divorce, because of occupational necessity, or simply to secure more adequate housing. Single-parent families move more often than two parent-families. These higher rates of mobility are directly associated with low income. Children who do not reside with both parents suffer more moving-related stress than children who do (Tucker, Marx, & Long, 1998). Children who move as a result of divorce report less involvement in school social activities in the years following a move when compared with non-movers, even when stressful life events are controlled (Norford, 1991).

Child Characteristics

The stresses associated with moving affect different children in different ways, and this appears to be influenced by developmental levels, gender, and psychological risk factors. Although there is not a clear developmental pattern, the more carefully designed studies point to both the preschool years and early adolescence as vulnerable ages to moving-related stresses (Cummings, 1999; Vernberg, 1990). This is contrary to the prevailing common notion that the best time to move a family is before children start school and contrary to the notion that moving is hardest on students in their last years of high school. Preschoolers have difficulty dealing with the changes in familiar surroundings, lack the coping skills of older children, and have trouble cognitively understanding the need for the move. Also, they are less likely than older children to understand abstract concepts of time such as "in 6 months," which may relate to when the move will occur. Early adolescents report about three times as much difficulty forming friendships as do children in the primary grades (Barrett & Noble, 1973). Gender does not appear to have consistent effects on mobility reactions. Some have argued that males react more negatively to relocation and other life transitions (cf. Rutter, 1981) than females (van Vliet, 1986; Vernberg, 1990). Males reportedly have a harder time leaving old friends and making new ones, and experience more peer rejection, than do females (Donahue & Gullota, 1983). On the other hand, Brown and Orthner (1990) found that recent moves and a history of frequent moves were more strongly associated with low life satisfaction among female than male adolescents. Finally, it has been recognized that children with existing academic and behavioral problems require structure, consistency, and special attention. Thus, it is not surprising that environmental changes would affect children who have pre-existing problems more than children who do not. Kantor (1965), in one of the few studies to assess children both before and after a move, found that negative mobility effects were attributable to initial behavioral differences between children, not mobility per se.

Family Characteristics

It is virtually impossible to disentangle the effects of family variables from the impact of relocation. It is the parents who inform the child of the future move, deal with children's associated concerns and anxieties, make the important relocation-related decisions, and interact closely with children throughout the transition period. If the family attitude toward moving or toward this particular move is negative, then it is likely that the child's attitude will be negative as well. Several studies have underscored the importance of the mother's attitude toward the move on children. Norford (1991) reported that more than 60% of mothers who had relocated their children an average of seven times reported that family moving was either "moderately" or "very" stressful. Further, if either parent becomes overanxious, withdrawn, physically stressed, or intolerant, then this, as well, will affect the child, particularly if the child connects this behavioral change to the move. In corporate families the needs of the head of the household may so overshadow the needs of other family members that problems develop. Several studies indicate that moving can result in depression but only when family support and social cohesion is low. For example, the negative effects of relocation on children are considerable when fathers are uninvolved and mothers are unsupportive (Hagan, MacMillan, & Wheaton, 1996). By contrast, in the military community, relocation is a necessary part of life, and families are supported throughout the transitions to new locations in the states and overseas.

School Factors

School factors are an important, although unstudied, moderator of moving-related reactions. School size, quality of teacher-student interactions, opportunities for leadership roles, curriculum demands, policies and norms, and the nature of support services all would appear to have an impact on mobility adjustment. Occasionally school experiences can exacerbate moving reactions. For example, considering the effects of group cohesion, it is not surprising that elementary age males who enter school late in the year are less likely to be accepted socially than those who enter early in the year. Schools characterized by existing cliques create challenges for the newly relocated adolescent. However, in most cases, relocation as an issue for children has not been systematically addressed by school systems. One early review found only two large-scale school intervention programs to help children who relocate (Blair, Marchant, & Medway, 1984). One program, known as the Summer Visitation Program, used school counselors to (a) conduct home visits with new school families, (b) involve those families in school and community activities by sponsoring various outings and social opportunities for them, and (c) develop support groups for recently relocated children. This program was successful in increasing social contacts and happiness, and in reducing absenteeism in participating students as compared with nonparticipating controls. A second program, Students Assimilated Into Learning, also sought to increase parental involvement in the school. This program made use of staff development activities and special learning centers to quickly assess the educational status of students moving into the school and provided children assistance with academic deficiencies. Data obtained from this program indicated that targeted students showed increased achievement scores. There is no indication that such school-wide programs are in operation in schools today.

The fact that schools have historically viewed the child who is relocating as a deficit when compared with children with a stable residence has led some educators to encourage grade retention of incoming students as a way to aid their school adjustment. Indeed, research shows that highly mobile children are retained more often than non-mobile children. *Light's Retention Scale* includes mobility as a factor to consider in deciding whether or not to retain a child. Yet, there is little evidence to indicate that moving harms school achievement. In one study (Norford, 1991) only 15% of adolescents who had moved at least six times reported that they were academically behind their new classmates. Given that retention itself is a practice of questionable educational value and given research showing that mobility effects can be effectively minimized by proper home and school support, there is little evidence to support the practice of routinely retaining a child based solely or even primarily on their relocation.

Community Factors

Conventional wisdom suggests that it is easier to adjust to a new community with characteristics similar to an old community. Moves that subject children to cultures and subcultures different from those to which they are accustomed are presumed to demand greater adjustment on the child's part. Along these lines it is often assumed that moving from one military base to another is generally not highly stressful since bases tend to be similar and because the base tends to insulate the military family from the surrounding community. In addition, relocation support services are available through Family Service Centers and military assistance centers associated with service branches. While this may be true, there is no empirical evidence that children in military-related moves do any better (or worse) than children in corporate moves (Norford, 1991).

The Impact of Relocation on Children

In attempting to understand the impact of relocation on families it is not only important to consider the stages of moving and the various elements associated with the process but also to realize that the public generally views relocation as emotionally trying and resulting in anxiety. Empirical research does not bear out this negative view. The following three excerpts are typical of how mobility is perceived by many citizens and by the media. The first is from Rouhana (1990):

> Samantha and Robert Brown had been preparing for moving day for weeks. On the big day Samantha left her 1-year-old son with a neighbor while she and her husband supervised the movers. Eight hours later it was time for one last look around. With the baby in her arms, Samantha entered his now-bare room. He took one startled look and began to bawl. [Samantha] was surprised at the force of her infant's reaction: "There was no question. He knew something was terribly wrong." Like most infants, [Samantha's] baby suffered only momentarily, because the real center of his world was his parents.... But for most kids, be they toddlers or teens, moving can be stressful.

The second is from the *Boston Globe* ("Helping kids handle the stress of moving," 1992):

> Whether you are relocating across town or across country, moving is traumatic for children of any age. The change in routine, parents' preoccupation with the move, giving up friends—these are all losses for the child. The worst mistake parents can make is to underestimate their importance.

The third is from *The New York Times* ("A move can shake a child's confidence," 1988).

> Daniel and Gerry Barnett hadn't expected their children to react so strongly to the family's move from Oklahoma to suburban Chicago. Twelve-year-old Helen told her parents that she looked forward to the move because it was, "a neat thing to do...," but as the move approached, she became more obstinate when adults asked her to do something. She would overreact to ordinary events. Helen's school grades dropped slightly in the next marking period

In short, both the popular press and general opinion is of the belief that moving is a potential traumatic event that can have long-term consequences on children's mental health and school performance. By contrast, although research suggests that there may be some short-term impact of mobility on children, data obtained from more than one hundred studies of children's relocation indicates that there is little evidence of any long-term negative impact. What follows is a brief overview of research in this area drawn from earlier reviews by Humke and Schaefer (1995), Norford (1991), and van Vliet (1986).

Academic Achievement

Numerous studies have looked at the achievement levels of mobile children and comparison groups. Across 18 of the most methodologically sound studies (out of more than 40 conducted) there is virtually no effect of mobility on school achievement once initial achievement levels are controlled. Mobility does appear to hurt the achievement of students with academic problems prior to a move.

Social Adjustment

Does frequent relocation undermine self-image, peer relations, participation in extracurricular activities, and other areas of social adjustment? Most research suggests that it does not. High frequency and low frequency movers have not been found to differ on traditional scales of self-concept and personality. There is some evidence that depression may be associated with higher levels of mobility in young adolescents. However, it is not clear in these studies if the depression arose after the move or during earlier preparatory stages. In one well-controlled study (Norford, 1991) there were no differences in depression and perceived social support among high school students varying in mobility history, including nearly 100 students who have moved seven times on average. Norford did find that frequent mobility after seventh grade did significantly affect participation in extracurricular activities. Norford measured potential positive adjustment indicators as well and found no consistent positive effects associated with high mobility.

BEST PRACTICES

With familiarization with the research on family relocation and with appropriate training in assessment, child development, and intervention, school psychologists, possibly working along with school counselors, should be able to apply best practices to family relocation issues. School psychologists are likely to encounter mobility concerns in two primary contexts. First, in their capacities as school consultants, school psychologists occasionally are asked to provide information about the effects of relocation on children to various sources. Those seeking this information may be parents (those considering relocation or those who have recently relocated), teachers (faced with making decisions about newly transferred students), school administrators, and, occasionally, the media. For example, an article on family relocation could be written for a school newspaper or a presentation can be made at a teacher or parent meeting. Parents may be prone to worry about mobility effects far more than is warranted. Norford (1991) found that 27% of approximately 95 adolescents who had moved more than six times viewed frequent moving as "very positive" compared to 15% of their mothers. Only 3% of the students viewed moving as "very negative" compared to 10% of their mothers.

Typically, however, families new to a community probably are not likely to turn to school psychologists with these questions. If their child hasn't had school problems in the past or if the parents aren't familiar with school resources it is unlikely that psychologists will be consulted. Best practice, therefore, dictates that school psychologists take the lead in informing those in the community such as doctors, the clergy, and key people in school district administration of their knowledge in this area and their desire to provide assistance.

Second, in their roles of providing intervention services, school psychologists may be called on directly to (a) develop programs to ease mobility transitions or (b) work with children having difficulty with mobility-related adjustments. The following section reviews several best practices and helpful sources to aid in both capacities.

Parent Consultation

Parents who contact school psychologists for information about moving may do so at any stage of the relocation process. Typically, these parents fear that moving will upset their child in some way, and desire practical tips and resources to make the move easier. Table 2 provides some practical tips designed for parents. Further tips are presented in books specifically designed for parents, listed in Table 3, and in resources such as *Mobility* magazine. Many books written for the lay audience are useful, although some overstate the negative effects of mobility. Additionally, school psychologists can encourage parents to use one or more of the storybooks listed in Table 3 with their children to clarify relocation feelings and let children know that their feelings are not unique. A number of real estate agents and most major moving companies have resources and activities to aid families with many aspects of moving (e.g., North American Van Lines, Mayflower Transit, United Van Lines, and Ryder Truck Rental) including moving with children. Useful websites include virtualrelocation.com and MoversNet.com.

Consultation With School-Based Professionals

School psychologists should share information and research regarding family mobility with schools, teachers, counselors, and administrators. Useful tips for teachers are presented in Table 4. School psychologists can routinely be given the names of all families who have recently moved into the school district in order to offer family and academic assistance if necessary. Particular attention should be given to families with children that have some of the identified risk factors, such as preexisting problems, economic and family distress, and difficulty with social skills.

Program Development

School psychologists can take the lead in developing school-based preventive programs focusing on relocation issues. In particular, aspects of the well-validated Summer Visitation Program reviewed earlier can be developed by special service teams, particu-

Table 2. Tips for parents about moving

1. Discuss the move openly and honestly with children once the decision to move is definite. Elementary school-age children and older youth should be given at least 3 months notice, if possible, to prepare for the move. Preteens and teenagers should also be given some input into family decisions. For preschool children it is preferable to wait until moving day is closer such as when moving-related activities change family routines. For these children, reading storybooks about moving may stimulate questions, elicit feelings, and ease any anxiety. Toys, such as trucks and wagons, can be used in "moving games" to illustrate the concept of moving to the 2- and 3-year-old child. Be clear the move is final, and avoid promises you may not be able to keep.
2. Attempt to delay a move during other upheavals in the life of a child such as right after a sibling's birth or immediately following a divorce or parent's death. Such moves may compound the stress and adjustment demands placed on children.
3. Get children involved in the move. Encourage children to take on projects designed to gather information on the new community. Subscribe to the newspaper in the new community and do virtual community tours using the Internet.
4. Start building a new community network before the move. Inquire about religious groups, medical and social service facilities, educational opportunities, newcomers' assistance, and children's activities such as scouting. If relocation is due to corporate or military transfer, then inquire about special assistance offered.
5. Recognize your own stress level, and do not take on more than you can handle. Moving yourself, looking for a house without an experienced real estate agent, or moving into a home requiring repairs and renovation can serve as added stressors. Recognize that your stress level as well as your attitude about moving will affect your child's behavior.
6. Make sure that all medical and school records are sent ahead in advance. These should include a birth certificate, achievement tests, immunization records, and relevant school correspondence including all records relating to special education.
7. Take responsibility for orienting your child to the new school and community. Have a meeting with your child's new teacher to discuss the placement. Inquire about any special programs or assistance provided by psychologists and counselors for relocated students. Do not allow your child to repeat a grade just on the basis of a move. If retention is recommended, then insist on a full individually administered evaluation and, if necessary, a second opinion.
8. Although a move during the summer is less likely to be disruptive to a child's school performance, a move during the school year brings children into immediate contact with others their age. Also, teachers and classmates are more likely to treat children as special when they enter during the year than at the start of a new school year.
9. On moving day reassure children that their possessions are going to the new home. Allow children to pack a small suitcase to carry with them, including such things as special playthings, mementos, and pictures. Load the furniture of young children last so that these items are first to be unloaded and placed in the new home. Once in the new home allow the child some say in how the room will be decorated, or arrange the new room to match the child's old room. Make the first night in the new home special by having some kind of party.
10. Formal good-byes, such as going-away parties, should be encouraged. Help children make scrap books with pictures of old friends, and encourage them to correspond with old friends using letters and e-mail.
11. Take the initiative, especially during the initial weeks of a move, to actively explore the new environment. Make an effort to meet people. Invite neighbors over and volunteer at the school.
12. Avoid staying indoors and devoting all your time to unpacking and arranging the new house. Be sure to spend quality time with your children.
13. Try to find positive things in moves required by financial hardship.
14. Moving may diminish teenagers' feelings of independence. Therefore, aid teenagers in exploring social opportunities in the new environment. Resist the temptation to be overprotective because of unfamiliarity with the new community.

larly in areas of high family mobility and transience. In addition to interventions with students just entering school, counseling groups can be organized for elementary school children whose families will soon be moving to other communities. In such groups, children can be given an opportunity to share feelings about moving and practice the social skills involved in leaving old friends and making new ones. Programs also can be developed for parents to help them understand the impact of family mobility as it relates to their own specific circumstances and the developmental status of their own child.

Counseling and Therapy

As was previously indicated, it is unlikely that school psychologists will encounter very many children whose family mobility, in and of itself, results in serious mental health problems such as depression, withdrawal, physical ailments, or academic problems that

Table 3. Bibliography and readings on relocation

Suggested Books for Parents

Artenstein, J. (1990). *Moving: How to be sure that your child makes a happy transfer to a new home.* New York: TOR.

Carlisle, E. (1999). *Smooth moves: The relocation guide for families on the move.* New York: Teacup Press.

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Goodwin, C. (1999). *Making the big move: How to transform relocation into a creative life transition.* Oakland, CA: New Harbinger.

Kalb, R., & Welch, P. (1992). *Moving your family overseas.* Yarmouth, ME: Intercultural Press.

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Books for Children: Preschool and Primary Grades

Asch, F. (1989). *Goodbye house.* New York: Aladdin.

Banks, A., Evans, N., & Kelley, T. (1999). *Goodbye, house: A kids guide to moving.* New York: Crown.

Berenstain, S., & Berenstain, J. (1981). *The Berenstain Bears' moving day.* New York: Random House.

Biale, R. (1996). *We are moving: Lets make a book about it.* Berkeley, CA: Tricycle Press.

Carlstrom, N. W., & Wickstrom, T. (1999). *I'm not moving mama!* New York: Aladdin.

Cuddy, R., & Zoehfeld, K. (1999). *Tigger's moving day.* New York: Disney Press.

Mayer, M. (1995). *Little monster's moving day.* New York: Cartwheel.

McGeorge, C. W. (1994). *Boomer's big day.* San Francisco: Chronicle.

Packard, M., & Lopez, S. (1998). *Kitty's moving day: Fisher-Price Little People little pockets playbooks.* New York: Readers Digest.

Sharmat, M. W. (1996). *Mitchell is moving.* New York: Aladdin.

Stimson, J., & Rutherford, M. (1997). *A new home for Tiger.* New York: Barrons Juveniles.

Books for Children: Elementary Grades

Davis, G. (1997). *The moving book: A kid's survival guide.* New York: Little, Brown.

Hurwitz, J., & Wallner, J. (1997). *Aldo Applesauce.* New York: Morrow.

Milord, S., & Milord, J. (1985). *Maggie and the goodbye gift.* New York: Lathrop, Lee, & Shepherd Books.

O'Donnell, E. L., & Schwartz, A. (1990). *Maggie doesn't want to move.* New York: Aladdin.

Schulman, J., & Hoban, L. (1990). *The big hello.* Keighley, England: Mulberry.

Sharmat, M. W. (1999). *Gila monsters at the airport.* Chicago: Econo-Clad.

Books for Adolescents

Anderson, P., & Strecker, R. (1992). *First day blues.* Seattle, WA: Parenting Press.

Lipson, S. L. (2000). *Knock on wood.* New York: Leba House.

Walsh, J. P. (1991). *Gaffer Samson's luck.* New York: Farrar, Straus, & Giroux.

Videotapes for Elementary Grade Children

Let's get a move on! (1990). Newton, MA: Kidvidz.

Table 4. Tips for educators about moving

1. Present children who are moving with photo albums of classmates and friends. Consider having a going-away party for moving students.
2. Announce the arrival of new students. Make sure they are included in yearbooks, etc.
3. Assign buddies to new students. Buddies may also serve as school guides and peer tutors.
4. Encourage recently moved students to do presentations on the places they have lived.
5. Be sensitive to family stresses that may be associated with mobility. Provide families in need with information about support services or make an appropriate referral.
6. Do not routinely retain new school enrollees. Retention decisions, if made at all, should not be based on family mobility history or the ability of the child to adjust to new school routines. If academic or behavior problems are present, then consult the school psychologist.
7. Maintain particularly close contact with newly relocated families to ensure good school-home communication and parent involvement.
8. Participate in and encourage school-sponsored meetings and social events for parents of newcomers to acquaint them with school policies and community services.

necessitate extended counseling. Some adjustment problems are normal during the first 6 months after relocation and typically can be handled through family or teacher consultation. Unusual withdrawal, anxiety, anger, stress-related reactions, acting-out, or academic problems, however, should not be ignored and do require early intervention. In addition to family therapy, several non-behavioral techniques (cf. Medway, 1985) are particularly appropriate. These include play therapy, role playing to bring conflicts into awareness, and bibliotherapy. There is a wealth of good children's books on the topic of moving and relocation. Some excellent sources are listed in Table 3. These books are designed to help work through some of the emotional issues surrounding relocation and provide a vehicle for parent-child communication. Additionally, social skills training can be used to aid in building friendship networks and dealing with negative remarks made by others.

SUMMARY

Each year one out of five families relocate in the United States. The process of relocation involves several adjustment stages. A child's adjustment during each stage is influenced by many contextual variables such as reason for the move, the child's individual characteristics, and particulars of the new school and community. Because moving does involve changes and interruptions in children's schooling and friendships, there is concern among the public and school professionals about the effects of moving on children and their families. Despite this concern, research indicates that family relocation is far less stressful on children than many people believe it to be. Although relocation to a new community can cause children to be anxious, to develop behavior problems, and to have academic problems in the classroom, those problems typically are short-lived. Most normal children ultimately handle moving transitions well. Those who do not handle moving well typically have problems that are present before the move rather than as a result of the relocation. Within 6 months to a year it is virtually impossible to distinguish movers and non-movers on traditional measures of personality and achievement. Successful child relocation depends heavily on the behavior and attitudes of the adults in the home and on children's opportunities to make new friends within a supportive environment. Although the school environment can aid the relocation transition, with the exception of some isolated efforts, schools often have ignored their important role as a key community resource in aiding mobile families (Blair, Marchant, & Medway, 1984). School psychologists can serve an important function in both advocating for school-wide efforts and broadening their roles and functions to include aiding relocating families.

Family mobility is an integral part of the American lifestyle. By providing planned consultation and intervention services focused on relocation issues, school psychologists can bring to bear a variety of assessment, consultation, and intervention skills to a potential family dilemma.

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A comprehensive source designed for professionals who work with children who encounter a variety of relocation-related problems, including both routine family moves and divorce-related changes.

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This is a practical book on family moving written by a psychologist and social worker.

92 Best Practices in Interdisciplinary Service Delivery to Children With Chronic Medical Issues

Steven R. Shaw and Doris Páez
Department of Developmental Pediatrics
The Children's Hospital
Greenville, SC

OVERVIEW

Children with chronic medical issues are a large and growing population (Brown, 1999). Improvement in health care means that children's chronic medical issues are more frequently addressed at home or at school rather than during lengthy hospitalizations (Brown, 1999). Despite advances in medical care, academic and social problems are common in children with chronic medical issues (Brown & DuPaul, 1999). Academic and social issues that may be affected directly or indirectly by medical problems or treatments include cognitive ability, personality, adaptive behavior, motivation, school functioning, emotional disturbance, attention, memory, language, school absenteeism, family dynamics, and academic skills (Power, DuPaul, Shapiro, & Parrish, 1998; Tarnowski & Brown, 1995). Because children are surviving chronic and serious medical issues in greater numbers than in the past, effectively addressing the complex and reciprocal academic and social factors is a necessary role for school psychologists to embrace (Tarnowski & Brown, 1995).

Increasingly, school psychologists are addressing health-related issues in school and medical settings (Drotar, 1998). Among the roles that may be filled are parent training, child advocacy, assessment, service coordination, counseling, program development, and research (Brown, 1999; Power et al., 1998). Despite the variety of roles, there are common issues to be addressed for effective interdisciplinary delivery of psychological and educational services. Addressing the needs of children with medical issues is an interdisciplinary task. The ability to function well as a team member is as important as is clinical skill for effective service delivery. School psychologists, given their knowledge of school systems, consultation expertise, clinical skills, and research training, are well positioned to be leaders in interdisciplinary service provision to children with chronic medical issues.

Psychologists may be involved at one or more of four general levels of service delivery for children with medical issues: prevention, acute, chronic, and rehabilitation. The level of service delivery at which the psychologist is involved dictates role and function.

Prevention

Preventative care has two distinct definitions (Kaplan, 2000). The first definition refers to a child who is experiencing medical issues, and the goal is to prevent psychological or educational problems. Children with medical concerns are at-risk for future psychological or educational difficulties (Talley & Short, 1995). A school psychologist may review school, mental health, social, and medical records to determine potential problem areas. Additional assessment may be conducted to determine which areas of functioning may benefit from early intervention. For example, pre-maturity is a medical condition with well-documented risk factors and established efficacy of early intervention. Among the other medical issues that may warrant assessment for purposes of preventative care are injury, allergies, diabetes, exposure to toxins, alcohol and drug abuse, otitis media, and somatic complaints.

The second definition of prevention involves the reduction of the occurrence of chronic medical conditions. Examples of this type of preventative health care include violence prevention, problem–solving skills, social skills training, sex education, injury prevention, and alcohol and drug intervention. In addition, there are risky behaviors that, if not prevented, have long-term health consequences, such as smoking, poor nutrition, substance abuse, and eating disorders. Because many pediatric medical conditions involve health risk behaviors, psychologists frequently are included in preventative health care. Psychologists, especially those working in schools, are in a prime position to engage in primary prevention (Shaw, Kelly, Joost, & Parker-Fisher, 1995).

Acute

Acute care refers to health issues requiring emergency room care or immediate first aid. Injuries, life-threatening illnesses, asthma attacks, poisoning, and other urgent health needs fall under the category of acute care. Suicide attempts, pain management, psychotic episodes, grieving, and family issues may involve psychologists. Expertise in crisis counseling and grief and bereavement counseling can be of great value in emergency rooms and other locations addressing acute medical issues.

Chronic

Chronic illnesses are conditions of long duration that require some level of ongoing medical management and accommodations in life functioning. Physicians and psychologists recognize the educational and mental health consequences of many chronic pediatric medical conditions, providing multiple opportunities for medical and psychological collaboration (Frank et al., 1998). Asthma, severe allergies, HIV, and diabetes are common chronic medical conditions. Nearly all children with chronic illness will return to their home school. The Individuals with Disabilities Education Act specifies that chronic illness causing an adverse effect on education may be eligible for special education services under the Other Health Impaired category. Moreover, the Diagnostic and Statistical Manual-IV (DSM-IV) contains Axis III that is devoted to identifying medical issues that may be affecting the psychological functioning of patients. However, the educational needs for children with medical issues are complicated by heterogeneous educational, social, and mental health needs across individual case and condition types (Dryfoos, 1994). Collaborative efforts among medical professionals, psychologists, and educators are necessary to address the challenges of children with chronic medical conditions.

Rehabilitation

Psychologists frequently participate in rehabilitation after childhood illness or injury (Talley & Short, 1995). Rehabilitation is a multidisciplinary service intended to reduce the effects of physical, cognitive, and emotional impairments. Although physicians, nurses, and physical and occupational therapists are responsible for physical improvement, school psychologists provide much of the cognitive and emotional rehabilitation in the school setting (Power, Heathfield, McGoey, & Blum, 1999). Counseling and rehabilitation of academic impairments are within the realm of many school psychologists' skills (Shaw et al., 1995). Rehabilitation focusing on academics and social emotional functioning is a significant, yet often forgotten, aspect of children's recovery from illness and injury (Stuart & Goodsilt, 1996).

Although all four levels of service delivery are wholly appropriate for school psychologists, this chapter will focus on children with chronic medical issues. The management and prevention of academic and social problems for children with chronic health problems are activities that nearly all school psychologists will be called upon to address. In order to engage children with chronic health problems, there are several basic considerations that need to be acknowledged before successful service delivery can take place.

BASIC CONSIDERATIONS

There are several important roles for school psychologists in the management of children with medical issues. The roles in which school psychologists are engaged are functions of the training and expertise of the school psychologist. In each role, there are basic considerations to be addressed. These basic considerations have been called "barriers" in the literature (e.g., Shaw et al., 1995). "Prerequisites" to successful service delivery may be a more productive way to think about these issues.

Interprofessional Issues

Effective service delivery to children with medical issues requires collaboration and coordination between school psychologists and medical professionals (Drotar, 1993, 1995). The health care knowledge of medical professionals combined with educational and mental health knowledge of school psychologists in a cooperative, collaborative, interdisciplinary manner has potential to improve the educational, physical, social, and mental health of children with medical issues (Dryfoos, 1994). However, owing to significant barriers to successful consultation relationships, collaboration between these two groups of professionals rarely takes place (Conoley & Conoley, 1991).

The first challenge to collaboration between the two fields is the written findings resulting from evaluations (Drotar, 1998). Terminology is unique to each field and sometimes provides exclusivity to the interpretation of findings. Both professions would benefit from reducing jargon in oral and written communication (Shaw et al., 1995). The inability of professionals in other fields to understand written findings often leads to the dismissal of reports as unusable. Medical reports often do not address specific concerns and challenges manifested in the school and home settings. The treatment suggested in medical reports is usually not educational or behavioral in nature. Such reports often exclude teachers and psychologists from intervening with behavioral or educational strategies on behalf of children, because teachers frequently assume that the problems are only remediable through medical means (Purvis & Whalen, 1992). Moreover, when schools refer children to physicians, educational and psychological reports do not communicate enough medically relevant information to aid physicians in diagnosis or treatment (Drotar, 1993). Rather than interpreting different terminology as providing new information, each profession appears to interpret different terminology as lacking relevance to the referral problem (Resnick & Kruczek, 1996).

A compromise definition of collaboration may be useful: School psychologist and medical professional collaboration is a partnership marked by the exchange of valued information in a coordinated effort to improve the educational, mental health, and medical well being of children. Among the assumptions of this definition of consultation are (a) contributions from both professions are equally useful and valued; (b) assessment and intervention are conducted in a coordinated fashion, rather than by professionals working in isolation; and (c) information is shared in a jargon-free manner to contribute to all professions involved (Reeder et al., 1997). Only when psychologists and medical professionals agree on basic assumptions of collaboration can service delivery for children with medical issues become an enterprise marked by coordination and integration (Miller & Swartz, 1990). There are a growing number of subspecialties that have interprofessional collaboration at the core of their professional identities, such as developmental pediatrics, behavioral pediatrics, pediatric school psychology, and health psychology.

The pressures on medical practices to earn enough revenue to meet the demands of managed care contracts and office overhead make setting aside time for collaboration difficult. Likewise, school psychologists are under time pressures established by the legislation and regulation of the educational system. The goal of collaboration cannot simply be to meet and spend a great deal of professional time to address a child's needs. One of the goals of interprofessional collaboration is to save time and to allow practices to work with more children in a more efficient manner. Ignoring the needs for efficiency will lead professionals neglecting interprofessional collaboration as they succumb to time and financial pressures.

The effort required to surmount all of these barriers to engage in successful collaboration is great. Owing to financial pressures, systems often discourage collaboration, leading to the current situation where collaboration seldom occurs. Individual barriers are likely to fall as each profession becomes familiar with the other's goals, professional challenges, methods, and jargon (Drotar, 1995). With the reduction of barriers comes an increased likelihood that school psychology and medical collaboration will take place (Shaw et al., 1995). Overcoming systemic, training, and individual barriers to collaboration will not be easy. Recall that teachers and school psychologists and clinical psychologists and social workers work together daily, yet still have significant difficulties engaging in collaboration. Likewise, physicians and nurses rarely engage in collaboration despite many commonalties and opportunities.

Interagency Issues

Because most medical problems involve medical, school, and other agencies, there are many practical issues that must be addressed. One issue is definitions. There are over 80 different definitions of learning disabilities used in schools in the United States (Ysseldyke, Algozzine, & Thurlow, 1992). DSM-IV and International Classification of Diseases-9 (ICD-9) also have different definitions of learning disabilities. Medical diagnoses and special education eligibility are often related constructs, but are not interchangeable. Different agencies have different methods of billing. The child's family's type and level of medical insurance is important information. Because Medicaid rations the number of hours of service paid for within certain service delivery categories, careful use of Medicaid funding is important. Finally, internal accountability systems strongly affect the type of services that can be delivered. For example, in school districts where school psychologists are evaluated on the number of assessments, other agencies cannot expect extensive mental health services. Likewise, medical practices that are under financial pressures are unlikely to engage in activities that insurance companies or Medicaid will not reimburse (e.g., prevention). Acknowledging and spanning interagency differences are essential to providing interdisciplinary service delivery.

Child Transition

Children pass through many cognitive and emotional changes as the illness runs its course. Although there are some common issues to all children with medical problems, each medical problem tends to have some unique direct influences on cognition and emotions. An excellent resource is the book, *Health-Related Disorders in Children and Adolescents* (Phelps, 1998), that provides broad descriptions of the cognitive and emotional sequelae of a variety of medical problems. However, not to be overlooked are the indirect influences of medical problems on cognition and emotions.

DIRECT INFLUENCES

Some medical issues directly influence cognitive ability and personality. For example, a brain tumor may cause significant brain tissue loss resulting in deteriorating cognitive ability. Epilepsy, meningitis, later stages of HIV infection, anoxia due to cardiac arrest, some endocrine disorders, alcohol and drug use, and head injuries all may directly cause low cognitive ability and personality change. Moreover, some medications used to treat medical conditions may directly affect cognitive ability (Brown, 1999). Specifically, some, but not all, medications used to control seizure activity have been linked to reduced cognitive ability (Brown, 1999). The short- and long-term cognitive and affective side effects of many (perhaps most) medications have not been studied in detail with children. Although some medical issues may directly cause reduced cognitive ability and personality change, inferring a medical condition based on psychological test scores is inappropriate. Although there is much written about the direct effects of medical issues on cognitive, social, and behavioral functioning, most problems experienced by children with medical issues are due to indirect effects of illness and hospitalization. For example, simply being hospitalized and removed from the routine school setting can be a cause of academic and social problems that may have little to do with the illness or treatment.

PAIN

Children with medical issues frequently complain of pain. Pain adversely affects concentration, increases fatigue, and may lead to depression and feelings of helplessness.

Although there is a dearth of quality research on malingering of pain, malingering is a factor in 10–40% of pain cases (Siegel & Smith, 1989). Vague descriptions of diffuse pain or descriptions of pain that do not fit the medical course may be learned behaviors. In other words, the consequences of pain may be positive (e.g., extra attention, pain-killing medications) and pain complaints may be learned. Like any learned behavior, determining the antecedents and consequences of pain complaints is an important step. In many cases, some level of pain is controlled operantly. By changing antecedents and consequences of pain complaints, the levels of the perception of pain can be reduced to a large degree. Integration of behavioral observations from several professionals, clinical interviews, knowledge of treatment and disease course, and instruments should help to reduce being fooled by a malingering child. In some circles, it may be thought cruel to consider that a child with cancer may be malingering. However, an overestimate of actual pain may change or delay the course of treatment or result in an excess of pain-reduction medication. Both may have a negative effect on the overall physical and psychological recovery.

FATIGUE

Children with medical issues frequently experience physical and mental fatigue. In many cases, fatigue may also be a sign of malingering or lack of motivation. Consultation with medical personnel can help you to determine the level of physical and mental fatigue placed on the child by the illness or treatment.

STRESS AND ANXIETY

Chronic medical issues often lead to dramatic changes in the life of children. Change of any type causes some stress or emotional distress in children. In the case of medical illness, fear of death, anticipation of painful medical procedures, isolation from peers, change in lifestyle, becoming different from peers, and disruption of normal development causes extreme stress and anxiety. Children and adolescents with medical issues are twice as likely to develop psychiatric disorders as their healthy peers (Katon, Berg, Robins, & Risse, 1986). School problems, adjustment disorders, somatic complaints of unknown origin, panic attacks, hyperactivity, noncompliance with medical treatment, social withdrawal, and peer conflict are common results of medical condition. Depression occurs in 10–30% of children with severe medical problems (Katon et al., 1986). Children experiencing depression co-occurring with medical conditions are at-risk for suicide attempts. The more life threatening the illness, the more likely depression and other psychiatric problems will occur (Katon et al., 1986). Incidence of psychiatric disorders increases when the medical problems involve the central nervous system. The relationship between medical issues and anxiety are not well understood. Family support appears to be a mitigating factor in the development of high levels of anxiety (Katon et al., 1986).

MOTIVATION

Children with medical issues frequently are passive, withdrawn, inattentive, and fail to initiate responses (Lynch, Lewis, & Murphy, 1993). Many clinicians also report that medically involved children are uncooperative, verbally aggressive, and defiant. Lack of motivation is an extremely common complaint among psychologists and teachers working with this population. For most children, this is a phase to be worked through. When children are experiencing life threatening illness, pain, or fear of death, getting an "A" on Friday's spelling test may not be he highest priority. However, focusing on the normality of life and encouraging success in academic and social areas can aid in recovery and assist in helping children to envision and achieve a future.

QUALITY OF LIFE

Assessment of quality of life is becoming increasingly important as the survival rates associated with chronic diseases increase. Quality of life is a multidimensional construct relating to a child's functioning associated with illness or treatment (Spieth & Harris, 1996). The four basic domains are disease state and physical symptoms, psychological functioning, functional status, and social functioning. Instruments that are used to assess quality of life are either self-report, physician report, or parent informant measures (Spieth & Harris, 1996). Quality of life appears to be an important construct for improving the medical and psychological treatment of children and adolescents, yet assessment instruments of poor psychometric quality hinder the formal assessment of this potentially important construct.

TREATMENT ADHERENCE

Adherence to medical treatment is one of the challenges that physicians and nurses face. About half of all patients do not adhere to treatment regimens (Burrell & Levy, 1985). This number is higher for children and for persons with chronic illnesses. Even such important treatments such as insulin injection for diabetes (48% compliance) and antiasthmatic treatment (46% compliance) are not often followed (Burrell & Levy, 1985). Psychotropic medications are estimated to have a 35% rate of compliance to treatment.

Approximately 10% of hospital admissions can be traced to failure to use medications properly (Burrell & Levy, 1985). Although there are many methods for assessing adherence such as counting pills in a prescription, biochemical analysis of blood or urine, and physician opinions, the best and simplest method is to ask the patient. When a question is phrased, "Most people have trouble remembering to take their medication. Do you remember to take yours?" most children will answer honestly. Those who admit to having trouble taking their medications are also those who will best benefit from a behavioral adherence-enhancement strategy.

Family Transition Issues

Families with children who have medical issues experience severe stress on the family system. Grief and adjustment issues are two commonly experienced family concerns. Whenever a child is diagnosed with a medical problem, is hospitalized, or is placed on a treatment regimen, there is disruption in family life. In some cases, there is only inconvenience. In cases where a child dies or has a life-threatening medical problem, families are disrupted forever. Working through guilt, fear, and other intense emotions is often necessary for families to continue as a functional unit.

Intervention plans for children with medical issues who have siblings need to address sibling issues. Even young siblings should be included as an important resource in intervention plans. Such an approach provides additional family support to the child with medical issues and educates and empowers the sibling during this frightening and difficult time.

Many medical and educational professions do not appreciate economic stressors on families. Many families have inadequate health insurance. The result is that families often lose their savings, acquire debt, experience the stress of working with collection agencies, and borrowing money from relatives. Financial hardships are a major cause of marital difficulties.

Marital difficulties and divorce are more common in parents of children with chronic medical issues than the general population (Walker, Johnson, Manion, & Cloutier, 1996). Intervention at the level of parent counseling, financial counseling, and guidance through adjustment difficulties has the potential to be a valuable service that reduces risk factors for vulnerable children. Divorce is an additional risk factor for children with medical issues.

School Transition Issues

Teachers and school personnel are rarely prepared for the arrival of a student with medical issues. Medical conditions in children can create fear and avoidance reactions in many teachers that interfere with the instructional relationship. School personnel tend to either overestimate or underestimate the direct effects of the medical issues on children's school performance. Either every social, academic, or behavior problem is attributed to the medical issue or no social, academic, or behavior problem is attributed to the medical issue. In many cases, the medical issue has no functional bearing on children's school functioning. Education of school personnel on the educational sequelae of the specific medical issue and quality assessment of each child's educational needs are major factors in addressing the needs of school personnel.

BEST PRACTICES

School psychologists providing comprehensive service delivery to children with chronic medical problems take on a variety of roles. The training, ability, and willingness to engage in each of these roles and integrate these roles into a cohesive service delivery model define best practices.

Parent Training

When meeting with caregivers, make them aware of the issues that tend to arise with certain medical conditions in school settings. A common problem is that parents stop setting appropriate limits on the child's behavior. Failure to set limits is a frequent issue in vulnerable child syndrome (Katon et al., 1986). A related problem is that families tend to identify a sibling as the problem child who receives the brunt of negative interactions. Families need to be informed of common issues regarding major life changes families undergo when a member of the system has a medical issue. Families often want to know the cognitive and academic prognosis for children with medical issues. In these cases, school psychologists need to recognize the limits of knowledge on long-term effects of many illness and treatments. In addition, school psychologists must be careful not to place limits on a child's future educational achievement. School psychologists also provide a valuable service when they identify for families the types of educational accommodations and support (e.g., special education eligibility and services, legal rights, community agencies, homebound services) that are available for their child.

Compile a list or lists or, if possible, create a notebook of resources in your community as well as those in surrounding communities. These resources include specific professionals, agencies, organizations, parent support groups, and individuals who can address some of the child and family transition issues that are outside the scope of the school psychology service field. Be inclusive and creative when compiling lists, families may need different types of information (e.g., from hospice to respite care to clergy to credit counselors). Do not duplicate work that other agencies have already completed. Ask for existing resource lists from hospitals and other service agencies. Sharing knowledge with parents and among agencies is the key ingredient in interdisciplinary service delivery for children with medical issues.

Child Advocacy

Despite what a school psychologist learns about a child's medical condition, it is important to remember to treat the child and not the disease. As noted previously, automatically attributing behavior or learning problems to the medical issues is inappropriate. Knowledge is power. Children with medical issues often have little power. Therefore, children require as much knowledge about their medical issues and treatment as is available. When possible, allow children to make as many decisions about their health and educational care as is developmentally and medically appropriate. Often significant adults attempt to guard the children with medical issues by withholding information or not discussing the medical condition. Parents must be advised that this is rarely a productive course of action. Children know of the seriousness or level of complexity of their health status simply by their experiences (e.g., frequency of medical visits, changes in surrounding adults' behaviors). School psychologists should also address and highlight for others that non-cognitive issues, such as the fatigue, pain, weakness, and emotional toll related to the disease and not the disease itself could be at the root of academic problems and could be the focus of interventions. School personnel should also seek to make the school life of children with medical issues as normal as possible. For example, if there is an established classroom management program in the child's school then the same consequences and rewards would be applied to children with medical issues, if at all possible.

Assessment

Assessment for diagnosis or eligibility for a program usually requires a psychometric approach to assessment. Nationally norm-referenced standardized tests of intelligence, academic achievement, psychosocial functioning, and adaptive behavior are most appropriate for these goals. If the goal of assessment is to aid in developing an intervention or rehabilitation plan, then measures of current functional skills are required. Adaptive behavior scales, direct observations, and curriculum-based assessment are some of the measures used. Nationally norm-referenced tests are usually not effective for intervention development. An exception is that some diagnostic tests provide task analysis of academic skills. These tests allow examiners to pinpoint exact subskills that are in need of intervention. Without carefully developed hypotheses, the hypothesis- testing model of effective and efficient assessment cannot take place.

ASSESS PRE-MORBID FUNCTIONING

If the goal of assessment is to determine how much ability and skill was lost during the period of medical involvement, then the place to begin is to determine ability and skill before the injury. Hearing a teacher complain that a child's illness or treatment has caused poor reading performance may be reason for alarm. In many cases, children's reading was also poor before the onset of illness. Unless there is a previous psychological report, the determination of pre-morbid skills demands some detective work. A good place to start is an examination of the child's school records. Although teacher-assigned grades tend to be an unreliable source of information, they can provide some useful general data. For example: Was the child performing in a satisfactory manner? Are there specific areas of academic weakness? Were there any problems with deportment, citizenship, or behavior?

Any notes concerning detentions, teacher referrals for special education, referrals to the principal's office, or referrals to the psychologist or counselor should be noted. The most useful aspect of student records is group achievement test scores. Group test scores tend to be reliable, yet quite general. These norm-referenced test scores provide a solid estimate of reading, mathematics, and language skills compared to age peers. Interviewing the child's teacher from before the injury is the next step. How was the child's academic performance compared to classmates? Behavior compared to classmates? How was language development compared to classmates? Any unusual behaviors? And so on. If possible, any work samples, systematic direct observations, or curriculum-based measurement data that the child completed before the illness may be helpful to compare to post-onset of illness work. Parents may also have work samples from previous schooling. Finally, administer a teacher report form of an adaptive behavior checklist to teachers who knew the children before the onset of the medical problem. The teacher should respond based on behaviors presented in class before the injury. Interviewing parents and professionals, who know the child after the injury, may result in biased responses. In this fashion, some estimate of pre-morbid skills can be gleaned.

ASSESS TRENDS OVER TIME

During the course of an illness or treatment, abilities and test performance may change. Repeated testing with intelligence or nationally norm-referenced academic achievement tests will result in practice effects. Practice effects are often significant (ranging from 0.3 to 1.0 standard deviations). As a result repeated testing will confound practice effects with true improvement over time. Direct observation, curriculum-based assessment, and curriculum-based measurement may provide more information for tracking improvement over time. Brief, daily assessments of behavior or academic ability can be plotted on a graph to demonstrate improvement and regression in ability. Each probe or observation is not an especially reliable measure. Yet, these behavioral data effectively assess trends over time and are excellent supplements to standardized, norm-referenced measures. Effective integration of these two types of assessment provides experienced clinicians with assessment information valuable for diagnosis, developing and modifying interventions, and evaluating rehabilitation programs.

ASSESS ENVIRONMENT

The assessment of children with medical issues often focuses on the obvious medical problems and their psychological and educational sequelae. However, the assessment of the environment is an often forgotten aspect of good assessment. Through direct observations and interviews, the examiner needs to understand antecedents, consequences, and discriminant stimuli of behaviors. Parents, hospital workers, and teachers frequently treat ill children differently than they do healthy peers. As a result, behavior problems, academic difficulties, and lowered cognitive abilities can occur. Even in the case where a medical issue or treatment directly causes brain damage, a stimulating structured environment can aid in effective rehabilitation of impaired functions.

Service Coordination

There is a tendency for a variety of agencies and professionals to provide a wide array of services to a child with chronic medical problems. However, unless these services are coordinated and communication is effective, there is a risk of redundant and ineffective services delivery.

The first matter is establishing a communication system between the three eco-systems of a child's life, home, school, and medical agency (Shields, 1995). One method of establishing such a communication system would be to appoint a medical or transition liaison (Stuart & Goodsilt, 1996). Each school should have a standing medical liaison. Although there are advantages, the liaison does not necessarily have to be the school nurse. The liaison must be an employee of the school district (as opposed to a volunteer), be available daily to the school and medical professionals, and have knowledge of how to work with medical professionals. The liaison needs to have knowledge of medical technology, hospital policies and culture, as well as educational and community resources (Stuart & Goodsilt, 1996). The role of the medical liaison is to serve as the clearinghouse for relevant information about educational concerns for each child and the medical issues. The medical liaison also serves as a vehicle for assisting medical personnel in monitoring the health issues within the framework of the school. The medical liaison keeps communication and correspondence logs. The medical liaison helps to link the medical system, school system, and home system into an integrated treatment unit.

The liaison is involved in a second matter of service delivery. This involves deciding, or advising administrators, as to which professionals need to be involved in service delivery to children with medical issues. At this level, who needs to be involved depends on the questions regarding the child with medical issues. Within the school district these questions are issues of eligibility for special education services, accommodations in the classroom, and the provision of school-based educational and mental health services. The questions arise from three possible scenarios. The first scenario is that there is a continued concern about the child regarding preexisting conditions (e.g., behaviors, academic problems) that are not related to the health issue. A second scenario is that academic problems have been acquired because of the medical condition or treatment. The third scenario is that the medical issue has exacerbated a preexisting condition. Each of these scenarios and their related questions require the establishment of which professionals need to be involved and at what intensity. For example, if the issue is a preexisting condition that has been exacerbated by a medical issue, then the persons who addressed the condition in the past and anyone who could provide information about that condition should be involved.

Counseling

Prevention and treatment of mental health issues is a fundamental component of service delivery to children with chronic health issues. Individual, group, and family counseling can have an ameliorative effect on the child and family transition issues experienced by nearly all children with chronic health problems. School psychologists are in prime positions to provide behavioral consultation to teachers and parent training of behavior management techniques (Power et al., 1998). Prevention programs such as anger management, social skills training, conflict resolution, and diversity training programs can be effective in altering the school milieu to creating a better environment for children with chronic medical issues.

Program Development

Program development and service delivery for children with chronic medical issues has received a great deal of attention in recent years. School-based, school-linked, and clinic-based services have all been described in detail (Dryfoos, 1994; Reeder et al., 1997; Shaw et al., 1995). Each of these models of service delivery requires a great deal of networking between school, health care providers, and the community. Often lobbying and education of school administrators, parent representatives, and community leaders is a major role for psychologists. More than one school-based or school-linked clinic proposal has failed to get off the ground owing to unfounded community fears that the clinic will distribute contraceptives or information about pregnancy termination. Community input and information are critical to provision of health services affiliated with schools funded with public moneys. The development of any program requires funding. Although some school-based and school-linked programs are funded exclusively with public funds, most have foundation support (e.g., Robert Wood Johnson Foundation). Therefore, nearly all school-based and school-linked programs have an individual dedicated to writing and maintaining grants and Medicaid compliance. Without all of these political and fiscal efforts, few programs for children with chronic illness are realized.

Program Evaluation

School psychologists may be the only professionals working with children with chronic medical problems who have research training and experience. Although basic and clinical research may be appropriate in some settings, the research skills of the school psychologists can best be used to evaluate the effectiveness of programs. Often educational, therapy, or rehabilitation programs are initiated because they "make sense," or because the programs are available, or because "we have always done it this way." Rarely are the efficacy, efficiency, and value of these programs evaluated. The same concerns apply to evaluating the efficacy of medical therapies such as stimulant medications for Attention Deficit Hyperactivity Disorder and other pharmacological treatments. Although summative evaluation may be useful for directing programs in future cases, continuous formative evaluation is necessary for making decisions to continue or modify programs.

SUMMARY

Increasingly, school psychologists are addressing the needs of children with chronic medical issues. Some school psychology training programs are offering specializations in pediatric school psychology. The four major journals in school psychology (i.e., *School Psychology Review*, *Journal of School Psychology*, *School Psychology Quarterly*, and *Psychology in the Schools*) have all published numerous papers on service delivery to children with chronic medical issues. School psychology is responding to the need for service delivery to this population.

However, working with children with chronic medical issues is a complex process because this is not a heterogeneous population. In addition, working with this population presents many novel challenges and new roles for schools psychologists. By addressing the major systemic and clinical challenges presented by children with chronic medication problems, new roles and functions can be developed to best meet the needs of these children.

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An excellent compilation of rare and common disorders. Each chapter is a four- to six-page summary of a medical disorder and the educational and psychological sequelae of each disorder. This book is the first place to turn when faced with a child with a medical condition, especially a low incidence disorder. Each chapter has an outstanding collection of references and resources.

Rosensky, R. H., Sweet, J. J., & Tovian, S. M. (1997). *Psychological assessment in medical settings.* New York: Plenum.
This book presents assessment approaches for the psychologist who works in medical settings. It provides guidance on how psychologists can be effective and valued members of health care teams. Information is also presented that can aid psychologists in balancing the needs of patients with that of the needs of a health care setting. Throughout the book case studies are presented to illustrate the assessment-diagnostic and critical thinking philosophy proposed by the authors.

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Best Assessment and Intervention Practices With Second Language Learners

Alicia Paredes Scribner
Southwest Texas State University

OVERVIEW

Since Richard Figueroa's chapter in *Best Practices II* (Figueroa, 1990), much has been written about the difficulties of assessing second language learners. Although there remains great concern about using norm-referenced tests on second language learners, school psychologists continue to "adapt" these instruments by using procedures they consider non-biased (e.g., testing the limits, using interpreters, using nonverbal instruments). These procedures can be insufficient in assisting the school psychologist in making informed recommendations for appropriate interventions. Taken alone, they, in fact, may underestimate the level of native language abilities of the student in question, as well as the student's overall potential to achieve in an English language curriculum.

Who are these second language learners and what educational services are available to them? Second language learners are students from linguistically and culturally diverse backgrounds whose native language is not English, and who have limited English proficiency (LEP). They cut across all grades in public education and enter the American educational system with different levels of academic achievement in their native language and in English. Within a given classroom, the continuum of linguistic competence may vary from monolingual in the first language to some degree of bilingualism. Recent data (Macias, 1998) indicate school enrollment of second language learners more than doubled in the decade between 1987 and 1997, from 1,553,918 to 3,452,073, and continues to grow exponentially into this new millennium. Already nearly half of the nation's school districts enroll second language learners who speak more than 100 languages. While students from Spanish-speaking countries remain the largest group, the growing number of students from Asian Pacific populations has become the next largest group of second language learners (U.S. Immigration and Naturalization Service, 1995). By the year 2026, second language learners from a myriad of different cultures and ethnic groups in our global society are expected to make up nearly a quarter of our student body (Garcia, 1999).

In contrast to the unprecedented growth in the number of second language learners is the limited number of teachers adequately trained to teach those students. Even in some mid-size school districts, fewer than one in five teachers who currently serve second language learners are certified to teach LEP students (Paredes Scribner, 1999). Nearly one-third of LEP students receive no tailored assistance in understanding what is being taught. This means that these students receive limited instruction in how to speak English or in understanding content area subjects. Paralleling the teacher shortage for LEP students is the shortage in related services, such as school psychology. The combined effect of these shortages exacerbates the academic vulnerability of LEP students. Lack of appropriately trained and culturally sensitive assessment personnel, in particular, leads to psycho-educational practices that reinforce deficit assumptions for minority student performance.

Non-biased assessment for second language learners begins by examining the quality of education these students receive. We need to understand how best to develop linguistic competence in LEP students and shift our focus to more consultation and appropriate interventions in regular education. This chapter will present those interventions and assessment practices known to be effective with second language learners. In the Basic Considerations section, the areas in which school psychologists should become more knowledgeable are addressed. These areas include (a) achieving English language proficiency, (b) issues of acculturation that affect achievement, (c) advocacy-oriented assessment practices that reflect advances in the field of psycho-educational evaluation, and (d) instructional interventions and modifications. In the Best Practices section, recommendations are made for the desired competencies to be developed by school psychologists working with second language learners.

BASIC CONSIDERATIONS

Achieving English Language Proficiency

The literature on school reform and academic achievement is replete with examples of how students learn best. We know that learning takes place when teachers set high expectations for their students, when new learning theories guide instruction, when teaching and learning are collaborative, and when there is ample opportunity for listening, speaking, reading, and writing (Garcia, 1999; Paredes Scribner, 1999). Low expectations, on the other hand, perpetuate narrow curricula, which prevent students from developing the aptitudes needed to succeed in academic endeavors. What we have learned about enhancing academic achievement for the general population should also extend to second language learners.

As students become exposed to English as a second language, they first develop conversational skills in the new language where communication is largely mediated by the environmental context in which they find themselves. At this level of proficiency, students appear to be more linguistically competent than they really are because of the context-embedded nature of communicative interactions. Cummins (1984) has refined the concept of language proficiency by distinguishing between "surface level proficiency" and "conceptual-linguistic proficiency" (p. 136). He operationalized this distinction by describing the communicative skills first acquired when learning a new language as basic interpersonal communication skills (BICS), and the more involved cognitive/academic language proficiency skills (CALP), as the ability to manipulate language in decontextualized academic situations. This distinction was also analyzed by Shuy (1978) when he contrasted the quantifiable aspects of formal language (e.g., pronunciation, basic vocabulary, grammar) with the more pragmatic aspects of language proficiency (e.g., semantic and functional aspects of language).

Depending on the programs available in the schools, second language learners may be offered some form of bilingual curriculum, English as a second language (ESL) instruction, transitional bilingual education, and/or immersion programs. Seventy-five percent of second language learners are Spanish-speaking. Those in need of English instruction are primarily served by transitional bilingual programs, which offer a transition from early-grade Spanish instruction to later-grade English-only instruction (Garcia, 1999). For the remainder of second language learners receiving little to no instruction in their native languages, ESL or immersion programs prevail. The latter two programs depend largely on the use of English as the primary mode of instruction and do not require teaching personnel who speak the native language of the students. These programs are usually offered in classrooms in which there are heterogeneous non-English language groups.

Understanding levels of English proficiency and linguistic skills in contextualized and decontextualized settings is critical for the school psychologist working with second language learners. When teachers refer second language learners for psycho-educational evaluations, the school psychologist should be sufficiently knowledgeable about second language acquisition to be able to differentiate the student's level of proficiency in English. When the teacher states that the student knows sufficient English to be tested by a monolingual psychologist, the school psychologist will want to know if the student's proficiency level is surface-level proficiency or conceptual-linguistic proficiency. The school psychologist must ask the right questions to bring relevant, current information for a valid referral. Some questions to consider might include:

1. How long has the family resided in the United States?

2. Does the family live within or identify with the same cultural/linguistic community?

3. What language is used by various members of the family?

4. How well does the family communicate across generations?

5. What is the preferred language of the child at home? In school? With peers?

6. What language programs have been offered to the child? For how long?

Informal assessment procedures (story telling-retelling, interviews using open-ended questioning techniques) will assist the examiner to establish if the student is able to draw inferences, make evaluations, or analyze information with native-like fluency.

Acculturation

Level of acculturation also can impact the assessment process for second language learners. Acculturation refers to the changes that occur as a result of continuous contact between two distinct cultures (Berry, Trimble, & Olmedo, 1986). Educational attainment is a very important aspect of culture. The greater the difference in educational attainment between groups, the greater the cultural differences. Culture is both explicit and implicit. At the explicit level, culture is manifested in overt, customary patterns of behavior and in thinking and feeling patterns. At the implicit level, culture is manifested in covert, unspoken, and mainly unconscious values and assumptions (Gopaul-McNicol & Thomas-Presswood, 1998). Although we talk about cultural differences in assessment of second language learners, there remains a reluctance to incorporate the role of culture in the assessment process, probably as a result of cost factors. It takes longer and costs more to conduct a fair and non-biased assessment of LEP students involving two languages.

Berry, Kim, Power, Young, and Bujaki (1989) developed a model of acculturation that sets forth four modes of acculturation. *Assimilation,* occurs when ethnic groups choose to identify solely with the dominant society. *Integration* occurs when ethnic groups successfully involve themselves with the dominant culture and retain their traditional culture. They are equally comfortable in both cultures. *Separation* occurs when the ethnic group has little or no interaction with the dominant culture. The last, *marginality,* occurs when the ethnic group experiences a loss of its own culture or origin and simultaneously lacks involvement with the dominant society. Marginality creates anxiety so severe it often produces neurotic or deviate behaviors.

The extent to which new immigrants are acculturated into the new society depends in large part on (a) the importance new arrivals place on identifying or maintaining cultural characteristics of their ethnic groups and (b) the importance they attribute to maintaining positive relationships with the larger society and other ethnic groups (Phinney, Chavira, & Williamson, 1992). Depending on conditions of immigrant status and receptiveness by the mainstream culture, second language learners can experience acculturative stress, which is a normal reaction in the process of adaptation. Acculturative stress may manifest itself in learning difficulties as a result of adjustment problems caused by relocation, feelings of isolation or anonymity, and loss of friendships or family relationships left behind, which result in a discontinuity of everything familiar to the individual. Some families experience a conflict of values and role reversals when the more acculturated children assume financial and social responsibilities for the non-English–speaking parents. This leads to problems that range from extreme shyness to acting-out behaviors or more serious psychological problems. Individuals who migrate when in their teens experience higher levels of acculturative stress than those who migrate at a younger age.

Another very important factor when considering cultural differences is the complexity of culture. There can be many different cultures represented within a race or ethnic group, as well as many races and ethnic groups represented within any given culture (Frisby, 1998). We continue to make broad generalizations about "Hispanics," "Native Americans" or "Asians" when these groups comprise many subgroups and subcultures that are very different from one another. Approximately two-thirds of Hispanics are Mexican Americans, concentrated in the southwest and midwest, and these are followed by Puerto Ricans, who are mostly in the northeast, and finally

Central and South Americans and Cubans, found throughout the country (Gopaul-McNichol & Thomas-Presswood, 1998). Most recently, large numbers of Middle Easterners and Eastern Europeans have arrived as a result of political conflicts in their part of the world.

Diversity among these groups is wide-ranging. They may be influenced by other cultures or neighboring countries. Hispanics, for example, may be influenced by Spanish, African, and indigenous cultures. They are diverse in terms of language, education, length of time in the United States, countries of origin, and traditions. First- and second-generation immigrants are different from new immigrant groups. For example, Mexican American students born in the United States may have little in common with newer immigrant students from Mexico.

Most practitioners recognize the dilemma of testing second language learners with instruments that may yield results affected by culture or language difference. Sensitive practitioners will strive to create conditions that will enhance student performance. They must recognize that the examinee possesses certain attributes that cannot be generalized among all students from broadly conceived cultural identifications, such as Hispanic, Asian, Native American, or other ethnic minorities. Then, they must seek an understanding of the acculturative stress the examinee may be experiencing. Finally, they must establish rapport with the examinee, as well as ensure that the examinee has sufficient cognitive/academic proficiency in English so that test scores will be valid. If there is a suspicion that cultural characteristics affect the validity of test scores, then cautious practitioners will avoid basing important decisions on incomplete information and note such concerns in their reports.

Although it is clear that culture and cultural differences are important factors to consider in testing second language learners, it is difficult for practitioners to know what path to follow to comply with ethical and professional standards. The National Association of School Psychologists Ethical Standards encourage members to consider all information in the context of the student's socio-cultural background and the setting in which the student is functioning (National Association of School Psychologists, 2000). The Individuals with Disabilities Education Act (IDEA 1997) and the American Psychological Association (1993) also address issues of language and culture in the provision of psychological services. Yet, there are too many issues to consider and too many ways to approach changing attitudes. It is unrealistic to believe that practitioners will accomplish a new mindset when working with second language learners by simply reading a book chapter. However, the acquisition of incremental knowledge about acculturation, and the opportunity to work collaboratively in teams, will help the school psychologist gain greater sensitivity and become a better advocate for second language learners.

Advocacy-Oriented Assessment

Testing has become an integral part of our educational system. We have discovered much about how children learn, how learning deficiencies manifest themselves, and how testing results can guide instructional interventions. Schools are the largest consumers of testing instruments, and school psychologists, as the trained administrators of such instruments, have helped diagnose academic failures and solved many mysteries in the teaching-learning process. Tests are objective measures without which "we cannot calibrate an individual's level or rate of learning nor can we discover the reasons why the individual does not achieve" (Samuda, 2000, p. 2). Yet, as Samuda points out, these tests have fallen into disrepute when used with minority populations. Well-intentioned teachers, school psychologists, and administrators use testing results to aid in the sorting and labeling function, which results in overrepresentation of second language learners in special education programs. Tests have been known to have dire social and economic consequences for those students who are misdiagnosed and placed in minimal curricular programs (Samuda, 2000).

Although outside the scope of this chapter, the on-going controversy with large-scale district-wide assessments and the achievement levels of second language learners must be mentioned. Minorities as a whole perform less well than their non-minority peers in large-scale testing. Often, the results of large-scale testing present obstacles for minority students that (a) track them into reductionist curricula or (b) result in students dropping out of school (Miramontes, Nadeau, & Commins, 1997; Valencia & Guadărrama, 1996). In some states there are on-going efforts to include second language learners in district-wide

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assessments. If we are to improve second language student achievement, then these accountability systems must nurture effective practices and lead to effective instruction (Darling-Hammond and Archer, 1991).

Level of language proficiency is a critical factor in assessment of second language learners. When is a child whose native language is not English ready to be tested only in English? Figueroa (1989) contends that no one really knows because the technology of measuring language proficiency in the schools remains imprecise in assisting the school psychologist in differentiating between surface-level and conceptual-linguistic skills. The federal government has provided momentum to reform the entire assessment process. Several states are already advocating for less emphasis on psycho-educational assessment and greater availability of interventions in regular education. The groundwork for this reform stems from the work of Reuven Feuerstein, whose theory of cognitive modifiability supports a shift from a static to a dynamic process of assessing the learning potential of students (Jackson, Lewis, Feuerstein, & Samuda, 2000).

Feuerstein's theory of mediational processes appears to be very appropriate for second language learners. The elements in this theory encompass improvement of less effective cognitive functions, preparation for higher order learning through the establishment of prerequisite functioning, behavioral teaching of cognitive operations and content, provision of performance feedback, and the establishment of appropriate communication skills (Jackson et al., 2000). The student-teacher or student-assessor interactions help students make bridges to support their own learning, thereby making connections between cognitive skills and content materials. In addition, assessment reform can reverse the academic decline of second language learners by examining hidden strengths that traditional testing methods are not likely to discover. In order to achieve this goal, assessment of academic skills in the student's native language *must* be part of the process.

Current assessment procedures used with second language learners fail to accurately measure the student's linguistic competence in both the native language and in English. We must incorporate alternative assessment techniques such as systematic observation, mediated learning experiences, test-teach-test paradigms, and diagnostic teaching as interventions in order to focus more effectively on the process of learning, as opposed to the product of learning (Cummins, 1984; Figueroa, 1990; Garcia, 1999; Gopaul-McNicol & Thomas-Presswood, 1998; Miramontes et al., 1997; Paredes Scribner, 1999; Samuda, 2000).

Instructional Interventions

The current environment and profile of classrooms in the United States is far different than what it was 30 years ago; that is, that many of those teaching today went to school with classmates who were the same as they, a common-enough occurrence. In contrast, today's classrooms can be made up of students of radically different cultures with different native languages. Many school personnel are unprepared for the demands of an increasingly culturally diverse student population (Garcia, 1999). Additionally, in many areas of the country the teacher deficits are so high that classrooms are staffed by teachers holding emergency certificates, which means that questionably qualified teachers are often teaching the poor and minority students (Garcia, 1999).

Probably the most important consideration is the effectiveness of instruction for second language learners, because the areas mentioned earlier in this section are affected by classroom instruction. While some theorists claim that school failure can be explained by a "culture clash" between home and school, others submit unequivocally that lack of school success rests primarily on the failure of instructional personnel to implement effective teaching practices (Garcia, 1999). Consequently, these students, because of their poor English skills, risk being referred for special education services by undertrained and/or inexperienced teachers. Unfortunately, such referrals are made when the problems inherent in low achievement may be pedagogically induced. Owing to limited English language skills, second language learners are typically offered low level courses and English as a second language classes that emphasize segmented skills, worksheets, and little opportunity for oral language development (Paredes Scribner, 1995). When teachers and school psychologists absolve themselves of the responsibility for the education of these students, the chances of students realizing their full potential are further exacerbated.

In summary, a lack of attention to the various issues that affect the achievement of second language learners presents a contradiction between theory and practice. We know sound principles of learning and assessment. We also know that how these principles are implemented often results in faulty practices with second language learners. For example, owing to limited English skills, second language learners are considered to have minimal language or cognitive skills. Native-like fluency is expected with short periods of ESL instruction, with no reinforcement of English skills in the regular classroom. Students are exited from ESL classes typically after 2 years without further support (Miramontes et al., 1997). We know that it takes much longer to achieve fluency.

When we test these students, we do so in areas where they have had little or no academic experience. In essence, we may be penalizing them for their lack of quality instruction. Although we know that oral language development is the key to language and cognitive skills, we separate these students from fluent English speakers who could be effective peer language models (Miramontes et al., 1997). Moreover, many reading and writing interventions ignore the importance of oral language development. Many times these students are taught in their first language by teachers or paraprofessionals who speak the language, but may not read it or write it. Owing to the demands for bilingual personnel in teaching and assessment, these same paraprofessionals may operate with little to no supervision from certified staff (Garcia, 1999).

For assessment, we need to know details about a student's instructional program in order to make decisions about the student's performance and achievement. Owing to limited English proficiency, scores on placement tests or other types of group assessments lead to tracking of these students into reductionist curricula (Miramontes et al., 1997). We must collaborate with teachers and parents to ensure that students are not relegated to low-level or remedial classes, where they may remain indefinitely. Assessment practices should address the individual student's strengths and weaknesses, as well as the instructional requirements, to help all students achieve academically.

Not only are we guided by ethical and professional standards, but also by safeguards and guidelines provided by legislation that dictate how second language learners should be assessed. Court cases, statutes, and federal legislation have dictated that LEP students should be assessed in their native language (*Diana v. State Board of Education*, 1970; *Guadalupe Organization, Inc. v. Tempe Elementary School District*, 1978; IDEA 1997). Tests must evaluate what students are taught and assessment personnel must be appropriately trained to administer non-discriminatory assessments. Placement decisions should not be based on a single factor or a single score. Reevaluations should be timely and student progress should be monitored closely to ensure that instruction is relevant for the student's individual needs (Gopaul-McNicol & Thomas-Presswood, 1998).

To summarize, the school psychologist serving second language learners must

1. Be able to evaluate a student's level of language proficiency

2. Understand how acculturation may affect achievement

3. Perform appropriate and fair assessments

4. Recommend effective instructional procedures for this population of students

The following section further develops the areas of second language acquisition, acculturation, assessment, and instructional interventions by recommending added competencies school psychologists should develop in order to achieve best practices in the assessment of second language learners.

BEST PRACTICES WITH SECOND LANGUAGE LEARNERS

Research studies, investigations and publications that report successful programs for this population of students (Frisby, 1998; Garcia, 1999; Gopaul-McNicol & Thomas-Presswood, 1998; Miramontes et al., 1997; Reyes, Scribner, & Paredes Scribner, 1999; Samuda, 2000) suggest that assessment should be multi-varied and should be used to examine the extent of the student's knowledge and the manner in which the student learns. School psychologists working with second language learners require added competencies to address second language acquisition, acculturation, instructional interventions, and advocacy-oriented assessment. Both acculturation and instructional interventions must be considered *prior* to assessment. When formal assessment is indicated, the school psychologist should base assessment on the documentation generated by the pre-referral interventions, modifications, and the quality of instruction received by the student, using the added competencies listed below.

Competencies for Understanding Second Language Acquisition Programs

One of the major considerations in the assessment of second language learners is how the pre-referral process considers the student's levels of language proficiency, acculturation, and effectiveness of educational environment. Pre-referral intervention implies that all available and appropriate resources have been utilized before referrals for special education services are made. These interventions may include native language instruction in content areas, enhanced English language instruction, and collaborative teaching and learning strategies.

NATURE OF ESL PROGRAMS

When considering appropriate interventions, we must also understand the goals of language programs for second language learners. Many districts have "newcomer" programs designed for recent arrivals to the United States, who have limited proficiency in English, who are below grade level in language skills, who have limited formal education, or who have been in the country for fewer than 3 years (Genessee, 2000). The overall objective of newcomer programs is to help students acquire basic English language skills and to expose them to the culture of the American schools. Newcomer programs also use either sheltered instruction or bilingual instruction. Sheltered instruction refers to specially designed instruction in English that maximizes nonverbal instructional communication, combining content with English-language learning goals (Garcia, 1999).

Transitional bilingual instruction provides initial instruction in literacy and academic content in the native language at the same time that students are learning English through specialized English instruction in non-academic subjects. Transitional bilingual instruction attempts to achieve basic oral English proficiency within 2 years and transitioning to an all English classroom within 3 years. Second language immersion programs are designed for students who already have some English skills (Genessee, 2000). The objective for immersion programs is that students will develop English language skills while acquiring advanced levels of functional proficiency.

Successful programs for second language learners are those that offer support for an additional year or two after the student has been exited from bilingual education, monitoring the student's progress in the English language classroom (Paredes Scribner, 1999). Knowing the differences among the various language support programs and including these observations mean better and more reliable referral questions for non-discriminatory assessments.

LENGTH OF TIME REQUIRED TO ACQUIRE LANGUAGE PROFICIENCY

Acquiring a first or second language is a developmental process. There is a natural progression from simple to complex language functions as children learn to communicate orally. Depending on age, second language learners may have acquired language functions in their native language, which will facilitate second language acquisition. It takes 2 years to acquire BICS and those skills required to function in context-embedded communicative interactions. Under the best of circumstances, it takes 5–7 years to develop full CALP in a second language (Cummins, 1984). CALP skills are those skills fundamental to thinking and learning that the instructional program must foster. In order to provide optimal language learning conditions for the second language learner, the classroom instruction should provide

1. Constant opportunity to use and practice the new language
2. Oral language development as an added dimension of instruction
3. Planned daily instruction to develop critical thinking skills in English
4. Balanced program components so that curriculum is integrated
5. Structured language learning for success in literacy skills

Second language proficiency requires clear, distinct, and meaningful contexts created during instructional time. Proficiency does not mean drilling vocabulary or grammatical structures, but instead means using language to engage students in active exploration and expression of ideas. It is incumbent on assessment personnel to become informed and knowledgeable regarding second language acquisition to be effective consultants to teachers and parents. Some important facts to remember when assessing students who are in the process of acquiring English as a second language follow:

1. It is typical for English skills (vocabulary, grammar, pronunciation, and comprehension) to be less well developed than those of their English-speaking peers.

2. There is a predictable sequence second language learners will follow, similar to younger children learning their first language (listening, speaking, reading, and writing skills).

3. Reduced opportunities to use the native language will result in a loss of competence in the first language.

4. Code-switching or switching back and forth between the two languages is common. The examiner should attend to the level of sophistication exhibited in the student's utterances.

5. Results of language assessments should reflect skills in both the native language and in English.

Competencies for Understanding the Acculturation Process

It is level of acculturation, rather than culture per se, that is likely to affect test performance. Acculturation is experiential background in the new culture and is developmental in nature. We cannot presume that children raised outside the U.S. mainstream culture have had the same experiences, learning opportunities, or exposure to the mainstream culture as those of their American-born peers. An individual's level of acculturation will affect performance; that is, the more familiar he or she is with the American culture, the better he or she is likely to perform in traditional norm-referenced tests. In the process of familiarizing oneself with the new culture and learning a second language, there are factors that enhance or impede the acculturation process and the acquisition of the second language.

AFFECTIVE FACTORS

Second language learning can bring about feelings of inadequacy, threaten one's sense of self, and bring about other psychological factors such as culture shock and lack of motivation (Miramontes et al., 1997). Second language learners not only must learn academic content, but must also figure out a new system of language and communication. Negative experiences can affect the process of second language acquisition. Krashen (1982) has described these psychological factors as a type of "affective filter" that can facilitate or impede learner input. These psychological factors are affected positively if the school climate is "additive" or inclusive, or negatively if it is "subtractive" or exclusive. Students' attitudes are shaped by the circumstances they experience as newcomers to a host country.

Although the research on cognitive and perceptual styles is inconclusive, the relationship between culture and learning is worth mentioning in this context. Children come to school with some knowledge about language, how it works and how it is used, and learn higher-level cognitive and metalinguistic skills as they engage in socially meaningful activities. Children's development and learning are best understood as the interaction of linguistic, sociocultural, and cognitive factors. Recognizing that strict generalizations cannot be made, it has been observed that many Hispanic and Asian students tend to be field-dependent learners (Gopaul-McNichol & Thomas-Presswood, 1998). Field-dependent students tend to view things more globally, interact more cooperatively, and pay more attention to the social context in which they are framed.

Another area to consider under acculturation is cognitive processing. Cognitive processing refers to how individuals interpret and learn new information. Two cognitive processing styles have been identified in the literature: verbal/analytic processing (descriptive-analytic) and visual/holistic (inferential-categorical) (Gopaul-McNicol & Thomas-Presswood, 1998). The verbal/analytic learner prefers to split stimuli into discrete entities and to respond to them as separate units, while the visual/holistic learner derives meaning from the pattern of the whole. It is important to differentiate between the two learning styles because second language learners and other minority students typically are raised in environments where they are taught to be flexible and adaptable in their use of language. Information the school psychologist could share with the teacher(s) around these issues might increase a tolerance and an understanding of diverse cultural patterns of behavior. Furthermore, while the verbal-analytic learner is rewarded for individual competitiveness, second language learners and other minority students appear to learn best when allowed to work cooperatively (Gopaul-McNicol & Thomas-Presswood, 1998).

ADDITIVE CLASSROOM ENVIRONMENTS

The school psychologist can help identify factors over which the teacher can exert a positive impact on students. For example, organizing group size for instruction, instructional organization and strategies to enhance second language acquisition, and providing opportunities for language practice are a few strategies teachers can use to improve the instruction of second language learners. The concept of "cultural capital" (Miramontes et al., 1997) or the background of experience the student draws upon is another area educators can utilize. For healthy human development to occur, second language learners must experience opportunities to construct relationships between what they know and new learning. Ways to build on cultural capital are

1. Create a supportive school-wide climate
2. Create opportunities for student-directed instruction
3. Provide instructional strategies that enhance second language acquisition
4. Provide systematic student assessment
5. Develop collaborative teaching and learning practices
6. Provide on-going, relevant staff development

Competencies for Evaluating Educational Interventions

Successful school environments are characterized by open, friendly, and culturally inviting settings in which instructional arrangements allow students to interact with one another and use collaborative learning techniques. Rather than follow a strict curriculum, successful teachers align themselves by grade level and work together to develop thematic units to reinforce skills across the curriculum (Paredes Scribner, 1999). Other effective interventions with second language learners are enhanced language development and support in content areas, comprehension development, and cooperative learning. Team planning appears to be one of the most important interventions for second language learners. When same grade level teachers, or those working with the same group of students, plan instruction together, they share instructional procedures and strategies, as well as ensure that lesson plans cover and reinforce desired goals. By working and planning together, teachers not only minimize their workload but also develop a sense of community among themselves and their students. In contrast, individuals working alone tend to feel disconnected and unsupported (Miramontes et al., 1997).

ACTIVITIES THAT ENHANCE LANGUAGE DEVELOPMENT

Oral language development is the foundation of literacy skills. There is an interrelatedness between language, thinking, values, and culture that is fostered by effective language development. Second language learners must be provided with the type of linguistic support that will facilitate comprehension for them to succeed in school. The following strengthen language development:

1. Adjusting language demands by presenting material in different modalities, using context clues, and relating instruction to the student's experiences
2. Incorporating principles of second language acquisition to increase student understanding
3. Applying principles of directed reading activities to content areas by pre-teaching concepts and new vocabulary

4. Presenting lessons in a consistent manner so that the student knows what is expected

5. Encouraging students to predict questions, analyze situations, solve problems, offer opinions, and draw conclusions with oral and/or written materials

6. Offering cooperative learning activities

7. Shifting focus of instruction from merely understanding ideas and concepts to the ability to communicate those ideas.

Competencies for Assessment of Second Language Learners

Assessment of second language learners requires, in part, the specialized competencies discussed in the previous sections. Ability to speak the examinee's language alone does not ensure a fair, accurate, and nondiscriminatory assessment. Since few programs in school psychology offer training in bilingual assessment, practitioners must enhance their skills in this area through professional development, in-service training, or self study. Awareness and skill development in the area of bilingual assessment must include (a) an understanding of how language and culture can affect test performance, (b) validity of methods and instruments used on second language learners, and (c) careful consideration of test results within the context of the student's language, level of acculturation, and experiential history. Although pre-referral documentation for any student should include the following recommendations, it is imperative that referrals for second language learners provide the following information:

1. Background and educational history

2. Assessment of literacy skills in the native language

3. Quality and type of native and/or English language instruction

4. Nature of instructional strategies/modifications

5. Duration and effectiveness strategies/modifications

6. Dynamic assessment interventions

7. Clinical observations

8. Other authentic assessment in the classroom

WORKING AS PART OF A PROFESSIONAL TEAM

Owing to the multi-varied aspects of the assessment of second language learners, no single professional can do the job adequately. It is best to approach the assessment and interventions for this population of students from a team perspective. Beginning at the pre-referral level, the school psychologist should work with the classroom teacher(s) and others to recommend appropriate steps in improving the achievement opportunities of the second language learner to rule out a learning disability. Since learning is a process of both dynamic and constructive development, the more mediated the learning experience, the better the information to build on for more learning growth (Garcia, 1999). At this level, the school psychologist and teacher(s) can enhance the active learning opportunities; that is, those meaningful activities that are constructive in nature. The school psychologist can assist the teacher(s) in analyzing the nature of student errors. It is important to differentiate between errors made normally in the process of second language acquisition and semantic or pragmatic errors in language that can be detected in the native language as well as English. To do this, the school psychologist can consult with the teacher(s), the speech/language therapist, and other relevant personnel.

Similarly, professionals can administer Curriculum-Based Assessment and/or other criterion-referenced measures to assess the student's instructional level. Based on this information, the team can determine what skills need to be taught or re-taught to the student to ensure mastery. Of utmost importance will be the need to support the development of critical thinking skills. Second language learners should be given ample opportunity to

1. Interact fully with the instructional content

2. Test and question new ideas

3. Learn to understand the perspective of others

4. Discriminate among ideas

5. Defend their own point of view

Good teaching strategies that develop critical thinking will lead to academic achievement. On the other hand, poor programs and poor educational experiences will bear poor results whether they are conducted in the native language, in English, or in both languages.

WORKING WITH INTERPRETERS

Owing to the limited number of trained bilingual school assessment personnel who can perform adequate assessments in languages other than English, many school psychologists must rely on paraprofessionals to serve as interpreters to conduct assessments of second language learners. These paraprofessionals are often untrained for the role they are asked to fulfill, may lack adequate language proficiency in English or the native language, and may be unfamiliar with the assessment process (Figueroa, 1990; Paredes Scribner, 1999). As new instruments are developed that recommend the use of interpreters, we must ensure that the use of such paraprofessionals does indeed improve the assessment of second language learners. The following topics need to be addressed in training for interpreters (Langdon and Cheng, 1992; Paredes Scribner and Fuchs, 1998).

1. The interpreter may be able to serve as a cultural consultant to the assessment team. The interpreter could possibly report to the assessment team the student's native language linguistic skills and level of acculturation. Depending on the student's family's background, the interpreter could possibly assist the assessment team in establishing positive communication with the family, and advise the team on sensitive issues that may hinder communication with the family (e.g., methods of discipline, child-rearing practices). Finally, it may be relevant and helpful to the team if the interpreter can provide information regarding the educational system in the family's country of origin or cultural group.

2. The interpreter should become familiar with legal requirements of non-biased assessment. They should understand the concept of special education, support services, and the nature of learning difficulties so that they may relay this information to the parent(s). Training in due process and parents' rights will ensure that parents are fully informed in their native language.

3. The interpreter should understand and accurately use terminology specific to the assessment in the native language and in English. When translations of instructions are required, these translations should be developed ideally when there are at least three speakers of the same language group. Given the requirements of translation and the dialectical differences within languages, it is necessary to have a system of checks and balances among several speakers of the same language group to ensure the validity and reliability of the translation.

4. The interpreter's role in the assessment process is critical in providing improved services to students and families of second language learners. Since the interpreter may be the first contact with the family, training in interviewing skills is recommended. Understanding issues of confidentiality and neutrality are essential. It would be preferable for the school psychologist to use the same interpreter for a given language group. In all cases, there should be an opportunity to brief the interpreter about the relevant aspects of the case; there should be an opportunity for the school psychologist and the interpreter to discuss elements of the interactions during testing; there should be an opportunity for debriefing, during which the school psychologist and interpreter will discuss impressions, reactions, and any questions they may have.

5. If the interpreter is required to perform alternative assessment in the native language, then the interpreter will need to develop skills in administering such measures (e.g., obtaining natural language samples, conducting informal assessments of literacy skills in the native language). If school districts have to rely on the use of paraprofessionals to conduct more reliable and fair assessment of second language learners, then school psychologists must encourage their school districts to invest in the training of these paraprofessionals.

CHOOSING APPROPRIATE BATTERIES

Regardless of test instruments used, the quality of any assessment will be a function of how well the examiner knows the instrument(s), their psychometric properties, and the skillful interpretation of results. To fully understand what intelligence test batteries measure, practitioners must know the theoretical background of tests. For second language learners, clinical evaluation of test performance must take into account not only issues of validity and reliability, but also construct relevance, cultural loading, and linguistic demands of the instrument (Flanagan, McGrew, & Ortiz, 2000). Cultural loading refers to the interaction between test content and the examinee's level of acculturation. Specifically, culture specific knowledge to which the examinee has not previously been exposed can be considered cultural loading (Flanagan et al., 2000).

Many tests presume the examinee to have a high level of linguistic competence (i.e., ability to comprehend instructions, formulate or verbalize responses, or otherwise manipulate linguistic demands in a question/answer mode). There is strong evidence that intelligence tests that have high linguistic demands are biased for second language learners (Cummins, 1984; Figueroa, 1990; Flanagan et al., 2000; Garcia, 1999; Paredes Scribner, 1999).

The evolution of psychometric theory seeks more complete frameworks to evaluate cognitive abilities. As we learn more about how best to measure these abilities, the analysis of fluid and crystallized intelligence (Gf-Gc theory) appears to be a more reliable method when assessing second language learners (Flanagan et al., 2000). The majority of test batteries in use today in academic settings do not adequately measure the complete range of broad abilities. The Gf-Gc theory has driven the development of recent test revisions and has introduced practitioners to the concept of cross-battery assessment and construct relevance. Individual subtests in a test battery frequently are confounded by tapping more than one ability/construct. The concept of construct relevance becomes more critical when testing second language learners because many of the constructs have imbedded linguistic demands and may require varying degrees of cultural experience. Flanagan et al. (2000) offer a comprehensive review of widely used test measures and Gf-Gc theory. Figueroa (1990) called for application of new theoretical methods, and cross-battery assessment appears to answer this call because it offers the practitioner critical information about construct relevance and requires insightful consideration of the instrument's relevancy for this population of students. If school psychologists intend to improve the service delivery system for second language learners, then their assessments must include quantitative and qualitative measures in order to explain the child's past and present educational and cultural experiences. Table 1 summarizes the components necessary in the assessment of second language learners.

SUMMARY

As in all evaluations, best practices in assessment and intervention for second language learners do not begin at the time the school psychologist selects a test bat-

Table 1. Necessary components in the assessment of second language learners

Assessment	*Components*
Pre-referral documentation	• Examination of instructional program • Dynamic assessment of skills/abilities
Language assessment	• Level of native language skills • Level of English language skills
Assessment of literacy skills	• Oral and written skills in native language • Oral and written skills in English
Formal assessment	• Use of reliable and valid psychometric measures • Use of non-psychometric measures
Instructional recommendations	• Type and nature of language support • Monitor classroom language demands • Use various modalities in teaching • Pre-teach concepts/new vocabulary • Teach critical thinking skills • Integrate curriculum components • Offer collaborative learning activities

tery. Rather, best practices call for the school psychologist's intervention much earlier in the process. Through consultation with teachers, parents, and others, the school psychologist can exert much needed attention to the areas highlighted in this chapter. If the second language learner, or any student for that matter, is not receiving appropriate instruction, then the student should not be penalized for what could be construed as pedagogically induced learning difficulties.

This chapter offers insights into what the author feels are best practices based on experience as a practitioner and university trainer. No one person working alone can advocate for this population of students. A recent study of high-performing Hispanic schools (Reyes et al., 1999), found that best practices include a systems approach to intervention, a learning community created for learning to take place. The "community" or school takes into consideration the conditions under which the student is expected to learn by requiring the stakeholders to determine the required knowledge. The "community" considers the cultural elements of those who serve (educators, assessment personnel) and those who are served (students) that affect how the knowledge is to be understood. It then examines the "community's" learning capacity as an organization by considering if the cultural elements become barriers to the academic success of students. Finally, the "community" considers what it knows, what it thinks and feels, and how all the components work together. School psychologists, by skillfully developing the added competencies presented in this chapter, will become effective consultants and advocates for second language learners, and critical links in their own learning communities.

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This book presents a psychometric profile analysis modernizing the interpretation of the Wechsler Intelligence Scales by using the cross-battery approach. Relevant to this chapter is the information presented on measuring cognitive abilities of linguistically diverse populations by highlighting differences between culture bias versus cultural loading, and language bias versus language loading.

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Recommended as a valuable source in classroom consultation.

Reyes, P., Scribner, J. D., & Paredes Scribner, A. (Eds.). (1999). *Lessons from high-performing Hispanic schools: Creating learning communities.* New York: Teachers College Press.

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Samuda, R. J., Feuerstein, R., Kaufman, A.S., Lewis, J. E., & Sternberg, R.J. (2000). *Advances in cross-cultural assessment.* Thousand Oaks, CA: Sage.

The authors of this book examine the appropriateness of norm-referenced tests for students whose language and background are different to the mainstream culture. New advances and perspectives presented will heighten the awareness of practitioners and professionals regarding the issues relevant to assessment of second language learners.

WEB SITES FOR ASSESSMENT OF SECOND LANGUAGE LEARNERS

NCBE Library:
http://www.ncbe.gwu.edu/library/assess.htm

Bilingual Assessment:
http://www.earthrenewal.org/Questionnaire.htm

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Best Practices for Supporting Students With Autism

Martin J. Ikeda
Heartland Area Education Agency 11

OVERVIEW

School Psychologists face *increasing challenges* in the area of Autism than ever before. Although Autism and other diagnoses on the Autism spectrum are considered low incidence disabilities, affecting roughly 22 per 10,000 (Bristol et al., 1996) legal cases surrounding programming for Autism are increasing (Yell & Drasgow, 2000). In addition, parents of children diagnosed with Autism have created advocate groups that are quite assertive, putting pressures on schools to provide services with documented effect rather than settling for mere access to services (Shriver, Allen, & Mathews, 1999).

Effective parental advocacy has led to numerous due process proceedings in the area of Autism. In one case (*G. F. v. East Hanover Board of Education*, 1989), parents of a four-year-old boy contended that the proposed program of the district was not appropriate, and sought reimbursement for summer services. The parents felt that a behavior-oriented program was the only program acceptable to meet their son's needs. Expert testimony on behalf of the parents cited lack of specific goals in the Individual Education Plan (IEP), and infrequent data collection, as evidence that the IEP was not appropriate for meeting the needs of a child with Autism. In this case, the Administrative Law Judge ruled in favor of the district, finding that a "blended" approach was appropriate for meeting the needs of G. F.

In another case (*Union Elementary School District*, 1990), parents of a four-year-old boy sought reimbursement for behavior therapy by a private provider. The district had originally proposed placement in a class for children with visual impairments, subsequently recommended placement in a class for children with severe handicaps. In this case, the district provided no evidence, according to the Hearing Officer, that any of the proposed placements were sufficient to meet the child's individualized needs. The district, while recognizing the severe communication deficits presented by the child, only proposed speech and language services "as appropriate," and did not have a teacher that was specifically trained in Autism. In the original case and in the appeal by the district (*Union School District v. B. Smith*, 1994), the courts ruled in favor of the parents.

The two cases cited above are among the earliest proceedings in the now raging legal battles over Autism. Yell and Drasgow (2000) reviewed and summarized 45 cases resolved in due process hearings between 1993 and 1998. In some cases, the failure of the district to diagnose Autism was a point of contention. However, even when districts failed to properly identify students as Autistic, the more pivotal issue being debated tended to be over whether or not a district will pay for in-home, one-on-one discrete trial instruction for up to 40 hours per week (Yell & Drasgow, 2000).

The courts have applied the standard that came out of the U.S. Supreme Court in the *Board of Education of the Hendrick Hudson Central School District v. Rowley* (1982). The Supreme Court developed a two-part for courts to apply when reviewing cases involving disputes within implementation of the Individuals with Disabilities Education Act (IDEA) (Yell & Drasgow, 2000). First, courts examine if schools complied with the *procedural safeguards* of IDEA. Second, the courts determine if the IEP was *reasonably calculated* to confer *educational benefit*.

In the recent cases in Autism in which school districts have lost, Yell and Drasgow (2000) note procedural violations in the areas of parent participation, evaluation, IEP, placement, and qualifications of school personnel. In the area of assessment of Autism, school psychologists must be knowledgeable about characteristics of Autism, and skilled in evaluating Autism. Without background in Autism, the school psychologist lacks credibility and his or her assessment results may be challenged.

Where procedural violations were not substantive, courts then examined the appropriateness of program (Yell & Drasgow, 2000). Under this circumstance, schools have responded in two ways. First, some schools have responded by trying to place students with Autism in programs without support of professionals knowledgeable in Autism. This response has not worked, because the courts have ruled that students with Autism deserve access to treatment that is either recognized in the literature as an effective treatment or has documented effectiveness as a treatment. In addition, it is accepted that students with Autism should be working with teachers who have been trained to support students with Autism (e.g., *Board of Education of the Ann Arbor Public School District*, 1996). The second response of schools described by Yell and Drasgow (2000) is the argument that growth toward goals on individualized education programs provides evidence that programming is or is not working for individual students with Autism. In this response, schools argue that the diagnosis of Autism should not prescribe treatment. Instead, the diagnosis of Autism describes *characteristics* or *behaviors* that manifest in classrooms. Progress toward goals indicates if the method is effective, and lack of progress toward goals indicates that an instructional change needs to be made.

As a result of the *challenges* schools face in developing *appropriate* programs, school psychologists need expertise in *assessing characteristics* of Autism, as well as in *developing and evaluating effectiveness* of programs for children with Autism.

BASIC CONSIDERATIONS

Understanding the types of behaviors associated with Autism is critical for the school psychologist. However, the diagnosis of Autism is important only if that diagnosis *leads to interventions* in the classroom that have a true and meaningful impact on the student and the student's family (Shriver et al., 1999). Hence, it is important for a school psychologist to recognize behaviors characteristic of the *spectrum* of disorders known as Autism, so that some of the strategies described later in this chapter can be explored for potential benefit for the child. As with any of the behaviors or syndromes in this volume, the school psychologist needs to engage in activities *beyond diagnosis*. Assessments need to provide information about the *significance* of the behaviors exhibited by the child, as well as on whether or not the *interventions* needed to address the behavior need special education resources (Shriver et al., 1999).

Characteristics of Autism

Autism is considered a Pervasive Developmental Disorder (American Psychiatric Association, 1994; Bristol et al., 1996). This class of disorder is characterized by *severe impairment* in the areas of (a) social interaction, (b) communication, and (c) presence of stereotypic, or repetitive, behaviors (Bristol et al., 1996). The professional literature refers to this class as *Autism Spectrum Disorders* (Lord, 2000). This spectrum includes Autism, Rett's Syndrome, Heller Syndrome, Childhood Disintegrative Disorder, Asperger's Syndrome, and Atypical Pervasive Developmental Disorder (Bristol et al., 1996; Freeman, 1997; Sponheim, 1996).

Behaviors affected by Autism include social interactions, communication, and repetitive or stereotypic behavior (Shriver et al., 1999). Compounded with IDEA 97 eligibility requirements that vary from state to state (Shriver et al., 1999), and the contributions of other factors like mental retardation or other disorders, school psychologists need to thoroughly assess factors that are related to suspected Autism, but need to rule out other considerations as well.

Best Practices in Assessing Autism

The acronym *RIOT* is helpful in identifying assessment methods that could be used in assessing Autism: (a) *R*eview of reports and records, (b) *I*nterviews of significant caregivers, (c) *O*bservations of the child in a natural setting, and (d) *T*esting of the child.

Reviews of records and reports, when available, help the school psychologist understand the severity and pervasiveness of the behavior over time, and the types of treatments that were used to address the behaviors of concern. In addition, the school psychologist learns if others have used the diagnoses representative of the Autism Spectrum, or Mental Retardation, in classifying the child.

Interviews can be unstructured or structured. An unstructured interview might consist of the school psychologist taking diagnostic criteria from *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.) (DSM-IV) (American Psychiatric Association, 1994), and asking parents and teachers about the extent to which each behavior is present and the situations in which the behavior is most prevalent. The *Autism Diagnostic Interview-Revised* (ADI-R) (Lord, Rutter, & Le Couteur, 1994) is one of several structured interview formats available commercially (see Shriver et al., 1999, for other structured interviews available commercially). In addition, interview formats that are not specific to Autism could be used. An interview format that is helpful in both assessing severity of the behaviors but also in identifying potential treatment, is the *Functional Assessment Interview* (O'Neill et al., 1997). This interview format helps the school psychologist better understand the conditions under which behaviors are present or absent, and helps generate hypotheses about events that seem to "trigger" the behavior and consequences that could be maintaining the behavior. Functional assessment is an important consideration in treating Autism, and will be discussed in depth later in this chapter.

Behavior observations help in identifying and verifying things such as: (a) the extent to which child plays with other children his or her age, (b) initiation of social interactions through sharing of toys, and (c) response to attempts of children or adults to initiate an interaction with the child (Rogers, 2000). Shriver et al. (1999) provide an excellent summary of observational systems with adequate reliability and validity for use in assessing Autism for eligibility decision making.

The *Childhood Autism Rating Scale* (CARS) (Schopler, Reichler, & Renner, 1988), *Pre-Linguistic Autism Diagnostic Observation Schedule* (PL-ADOS) (DiLavore, Lord, & Rutter, 1995), and *Autism Diagnostic Observation Schedule* (ADOS) (Lord et al., 1989) all were reported by Shriver et al. (1999) to have at least some (if not small), evidence of reliability and validity. An extension of both the PL-DOS and the ADOS, the *Autism Diagnostic Observation Schedule-Generic* (ADOS-G) (Lord et al., 2000), has initial evidence of reliability as a screening measure. An additional assessment system, of which observation is an integral component, is the *Autism Screening Instrument for Educational Planning (Second Edition)* (ASIEP-2) (Krug, Arick, & Almond, 1993).

Of the observational systems mentioned above, the CARS requires the least amount of training to use. The school psychologist observes the child and then rates the child on 15 behaviors. CARS is an indicator of the severity of the behaviors associated with Autism and is considered a screening tool (Shriver et al., 1999), and should be one piece of *convergent* information used to assess special education eligibility for a child suspected of being Autistic.

The PL-ADOS, ADOS, and ADOS-G are structured observation systems. The ADOS was designed to complement the original *Autism Diagnostic Interview* (ADI) (Le Couteur at al., 1989), and was meant primarily for diagnosing Autism for research purposes (Lord et al., 2000). The PL-ADOS, ADI-R, and ADOS-G were developed when it became clear that instruments were needed in clinical applications (Lord et al., 2000). The ADOS-G attempts to broaden the spectrum of diagnoses which can be differentiated using the ADOS-G, instead of focusing only on one component of the Autism spectrum (Lord et al., 2000). Specific activities across several domains are presented to the child, and the response in that situation is recorded. The observations assess severity of behaviors in areas of social behavior and communication. A school psychologist would require supervised training, opportunities for practice, and feedback in order to become proficient at administering these instruments.

The ASIEP-2 is a comprehensive assessment system (Olmi, 1998). Included in the ASIEP-2 is the *Autism Behavior Checklist* (ABC). The ABC is completed by caregivers who know the child well. The other parts of the battery require observing of the child, and typically require more than one administrator. A teacher observation is included as part of the ASIEP-2. Information from the ASIEP-2 is useful for *screening* the types of behaviors associated with Autism presented by the child, and the severity of the behaviors.

The standardized observational systems available for assessing Autism are useful in identifying that a child meets *diagnostic* criteria for Autism. As part of a *multi-method* assessment, the school psychologist and interdisciplinary team will better understand the types of behaviors that are problematic, the severity of the behaviors, and the conditions under which the behaviors are observed. A school psychologist should not feel limited to using a standardized observational system. Any behavior that is carefully defined (Tilly & Flugum, 1995) can be observed, using behavioral assessment methods (Alberto & Troutman, 1999).

Anecdotal reports can be generated by classroom teachers, and analyzed to better understand when and where behaviors are occurring. For more direct observations, event recording, interval recording, time sampling, duration recording, and latency recording can be used (Alberto & Troutman, 1999). Direct observational systems are helpful in identifying instructional *needs* of the learner by observing factors such as the numbers of opportunities the child has to respond to the teacher, the accuracy of those responses, and the amount of time that the learner is actively engaged in their required work. A second strength of direct observational systems is that these systems can be used to measure changes in the learner that result from individualized programming (Alberto & Troutman, 1999).

Testing is the fourth method for assessing Autism. Published, standardized, norm referenced tests can be used to understand where the child is in comparison to a peer group or developmental standard. Specific to Autism, the *Psychoeducational Profile-Revised* (PEP-R) (Schopler, Reichler, Bashford, Lansing, & Marcus, 1990) is often used to test a child suspected of having Autism. Despite its widespread use, the PEP-R lacks evidence of utility in educational decision making (Shriver et al., 1999). Any available published criterion- or norm-referenced test (e,g, Woodcock-Johnson Tests of Academic Achievement, Woodcock & Johnson, 1989) or direct assessment of academic skill (e.g., Shapiro, 1997) can be used with a child with Autism if the school psychologist has reason to believe that the test will provide important information about the eligibility of the child for services, or the educational needs of the child.

Adaptive behavior measures, such as the Vineland Adaptive Behavior Scales (Sparrow, Balla, & Cicchetti, 1984), are often used as part of an assessment battery when working with children with Autism (Handleman & Harris, 1994). Measures like the Vineland provide a normative comparison for the child being assessed, in a variety of relevant domains like communication, motor, and daily living skills. The Vineland and other adaptive behavior measures can also be used to assess growth reported by caregivers over time. The school psychologist must remember, however, that measures like the Vineland are in essence scaled self-reports, and could supplement these measures with direct observations to verify reported growth.

BEST PRACTICES IN PROGRAMMING FOR STUDENTS WITH AUTISM

Much of the controversy in the area of Autism is around the issue of *effective* programming (Gresham & MacMillan, 1997; Yell & Drasgow, 2000). Over the years there has been evidence, using single-case designs and behavior analytic methods, that effective intervention can be implemented for communication, social, and behavior concerns (Shriver et al., 1999). The pressures on schools were increased, however, when advocacy groups began demanding *large-scale* evidence of effective treatment (Gresham, Beebe-Frankenberger, & MacMillan, 1999).

The data around large-scale program effectiveness are much more subject to debate than the data surrounding case reports (Gresham & MacMillan, 1997; Gresham et al., 1999; Smith & Lovaas, 1997). The debate centers around potential biased samples of subjects, the lack of randomization of subjects in most studies, and the ethics of making claims that may not be substantiated given the data (Gresham et al., 1999). Despite the controversy, there appears to be some consensus that effective programs for students with Autism contain components of: (a) curricular activities with sufficient scope to address the behaviors associated with Autism, (b) structured environment, (c) schedules and routines, and (d) a functional approach to assessing problem behaviors (Dawson & Osterling, 1997; Gresham et al., 1999; Harris & Handleman, 1994; Quill, 1997).

Curricular Activities for Students With Autism

Programs that are accepted in the professional literature as effective for helping children with Autism use curricula that emphasize expressive and receptive language, appropriate interactions with toys or objects, initiating and maintaining appropriate social interactions with peers and adults, and effective transitioning (Harris & Handleman, 1994; Gresham et al., 1999; Olley, 1999). While instructional methods vary from discrete-trial format (Lovaas, 1987) to creating opportunities for the child to practice skills in everyday routines (McGee, Daly, & Jacobs, 1994), children with Autism generally need support in one or more of the aforementioned curricular areas. Targeting skills of others the same age helps promote ambitious goal setting, and more positive impact on the life of the child with Autism (Kennedy & Shukla, 1995).

There is also some consensus in the Autism literature that curriculum considerations for students with Autism address (a) self-help, (b) self-management, (c) cognition, and (d) play/social skills (Harris & Handleman, 1994; Olley, 1999). Depending upon the level of functioning of the learner, self-help skills may need to start with compliance. Maurice, Green, and Luce (1996) provide a curriculum for developing self-help skills. While Maurice et al. (1996) advocate for discrete trial instruction outside of a school setting, others (McGee, Daly, & Jacobs, 1994) have successfully taught self-help skills using direct instruction in the classroom. Self-management skills have been effectively taught through use of schedules (McClannahan & Krantz, 1999; Schopler, Mesibov, & Hearsey, 1995).

Harris and Handleman (1994) provide opportunities for programs for young children with Autism to describe cognitive growth achieved by their programs. The May Center for Early Childhood Education (Anderson, Campbell, & O'Malley Cannon, 1994) addresses communication, self-care, pre-academics, social, play/motor, and aberrant behavior. Home-based programming and school transitioning are integral parts of this program. The Delaware Autistic Program (Bondy & Frost, 1994) uses picture exchanges to promote language acquisition and interaction with peers, adults, and the environment. Another program with documented cognitive effects is the UCLA Young Autism Project (Lovaas, 1987) that demonstrated that early intervention consisting of intensive one-to-one instruction of 40 hours per week positively affected cognition.

Play is an important component of a curriculum for young children with Autism (Olley, 1999; Strain & Cordisco, 1994). Improving play can be accomplished in different ways. One effective strategy is to have peers initiate play (Strain, Kohler, & Goldstein., 1996). Baker, Koegel, and Koegel (1998) used the Autistic child's obsessive interest to build opportunities to interact with peers. As children mature, social skills instruction (Gresham, 1995) can help promote peer interactions. To promote more spontaneous peer interaction, instruction should be in the natural context (rather than in contrived situations), and use preferred toy objects (McGee et al., 1994; Strain & Cordisco, 1994).

Structured Environment

A second important consideration for children with Autism is a structured environment (Quill, 1997; Gresham et al., 1999). Structured teaching improves skills of students by using their unique interests as motivators, and to structure the child's setting so that behaviors associated with Autism are minimized (Schopler et al., 1995). Structured teaching capitalizes on the visual processing strengths of students with Autism, and downplays the weaknesses in auditory processing often associated with Autism. Physical structure minimizes distractions, and defines physical boundaries. Using color-coded tape, construction paper, or other visual cues helps the student recognize locations within the classroom and school in which they are expected to perform. Dividers are set up to minimize distractions, and to further define boundaries for the student. Structure can be set up in any classroom, in group activities, play activities, transition activities, independent seat work, and in one-on-one instruction.

Schedules and Routines

Schedules help establish routines. Schedules teach the students what they need to do first, and aid in transitions. Schedules help students gain predictability from their setting by providing a sequence of activities that will occur within a school day. Depending upon the skill level of the child, schedules are developed using physical objects, pictures, line drawings, or words. The child needs to be taught to use the schedule, and to match their schedule with the corresponding object or word that represents where the student is supposed to be at a given time. Teachers keep objects or words handy so that schedules can be changed daily, or even in the middle of the day if an unexpected event (an assembly) occurs. It is important to create a daily schedule that creates a balance of easy-to-difficult, and preferred-to-nonpreferred tasks (Olley, 1999).

Functional Approach to Assessing Problem Behaviors

Students with Autism can present with difficult or challenging behaviors. These are behaviors that interfere with learning and, in some cases, with the child's being able to remain in a public school setting. A functional approach to problem behavior is important in *efficiently* identifying interventions with *higher likelihood* of success than interventions based on less systematic approaches. In order to conduct an adequate functional assessment, the school psychologist needs skills in interviewing and in direct observation of behavior (O'Neill et al., 1997, Tilly, Knoster, & Ikeda, 2000). The school psychologist learns more about the behaviors considered problematic. Instead of focusing on the shape of the behavior, like "hitting," the school psychologist is gathering information to understand the *function* that the behavior serves for the child (O'Neill et al., 1997; Tilly et al., 2000). By teaching the child other ways to escape or obtain certain events, people, or stimuli in the environment, most often the school psychologist assesses if the learner is attempting to escape or obtain: (a) attention, (b) activities, or (c) sensory stimulation (O'Neill et al., 1997).

An example of effective implementation of functional assessment is described in Hintze and Eckert (2000). A 12-year-old girl was presenting with severe noncompliance. Noncompliance is common in children with Autism (Shriver & Allen, 1997), and can have serious impact on a learner's ability to complete tasks in the classroom and on a school district's willingness to keep the learner in school (Hintze & Eckert, 2000). The school psychologist, using the Functional Assessment Interview and, Functional Assessment Observation Form (O'Neill et al., 1997), identified instructional demand as an antecedent to noncompliance, and escape from task as the perceived function of the noncompliance (Hintze & Eckert, 2000). An intervention that reinforced alternate behaviors, and did not allow escape from the task demands, was implemented. The intervention was successful in reducing noncompliance, and is a good illustration of how school psychologists *can* implement functional assessment in school settings.

Other Considerations for Supporting Students With Autism

Transitioning from activity-to-activity is often problematic for students with Autism (Olley, 1999). Schedules as described above help with transitions. School psychologists should interview teachers in all settings in which transitions are occurring, and observe the task demands in those settings, to help facilitate transition planning.

Another important consideration for school psychologists is the proliferation of unproven treatments, disproven treatments, or misinformation (Olley, 1999). In the area of Autism, pharmacological treatment using the drug Secretin (Horvath et al., 1998), facilitated communication (Biklen, 1990; Biklen & Schubert, 1991), Auditory Integration Therapy (Rimland & Edelson, 1994) and Sensory Integration Therapy (Ayres, 1972) are therapies often demanded by parents, but whose effectiveness as a treatment is not widely accepted.

In a recent two-part clinical investigation, Chez et al. (2000) investigated whether or not Secretin resulted in changes in behaviors in children with Autism compared to a group receiving placebo. The data indicated that there were no differences between the groups in reported changes in behavior as rated by the CARS. In a response to Chez et al. (2000), Rimland (2000) questioned the interpretation of the data, and suggested that Secretin indeed is a beneficial treatment. Chez and Buchanan (2000) responded in defense of their original conclusion, and challenged the field to provide peer-reviewed data of the efficacy of Secretin. To date, there are no peer-reviewed studies that demonstrate that Secretin has a positive and documented impact on behaviors associated with Autism.

Facilitated communication is a method of communication in which a "facilatator" provides support to the forearm of an individual with a communication impairment, "facilitating" access to letters on a keyboard (Braman, Brady, Linehan, & Williams, 1995). There are a few published, peer-reviewed studies that have found facilitated communication not helpful or even under the control of the facilitator (Hudson, Melita, & Arnold, 1993; Montee, Miltenberger, & Wittrock, 1995; Regal, Rooney, & Wandas, 1994; Wheeler, Jacobson, Paglieri, & Schwartz, 1993). These studies have been criticized by proponents of facilitated communication (Braman et al., 1995) because the studies were too empirical in nature, and did not honor the relationship that the facilitator and facilitatee need in order to be successful.

Using criteria established by Biklen (cf. Braman et al., 1995), Braman et al. examined the use of facilitated communication of three participants. The results of this study, which addressed the question, "Will people with Autism who use facilitated communication demonstrate similar levels of contextual accuracy regardless of whether the content is known or unknown to the facilitator?" found that the responses of the participants were strongly influenced by the facilitator. Braman et al. contend that their results do not disprove facilitated communication as an intervention. Instead, their results simply verify that in some cases, there is bias from the facilitator. Nevertheless, professional organizations such as the American Psychological Association, the American Academy of Pediatrics, and the American Academy of Speech and Hearing all have refuted facilitated communication as a treatment (Campbell, Schopler, Cueva, & Hallin, 1996; Gresham et al., 1999).

In Auditory Integration Training (AIT) (Rimland & Edelson, 1994), sounds and music are presented with certain frequencies filtered to individuals (Heflin & Simpson, 1998). The theory behind AIT is that a sensitivity to certain frequencies makes it difficult to hear. By presenting sounds and filtering out frequencies, the individual learns to adjust to intense sounds (Heflin & Simpson, 1998). The research on AIT typically employs anecdotal reports or behavioral rating scales as the outcome measure. There is little to no evidence using reliable, direct measures of behavior to suggest that AIT is an effective treatment for Autism (Gillberg, Johansson, Steffenburg, & Berlin, 1997; Gresham et al., 1999; Heflin & Simpson, 1998).

Sensory integration (Ayers, 1972) explains behaviors of children with Autism as functional attempts to seek preferred stimuli and avoid other, unpleasant or non-preferred stimulation. Sensory integration suffers from similar research voids as does AIT: no peer reviewed studies using direct measures of behavior as outcomes (Heflin & Simpson, 1998). Given the lack of data on applying sensory integration to children with Autism, and considering the conclusions of the learning disabilities community, this treatment should be viewed as exploratory at best. Genaux and Maloney Baird (1999) in a legal workshop on building defensible programs in Autism include sensory integration in the category of "non-validated practices." As such, school psychologists should be cautious when examining sensory integration as part of a student's programming.

One final consideration for school psychologists in working with children with Autism: listen to their parent(s). Parent-school collaboration, or lack thereof, has been an historical barrier in special education (Wood, 1995). The child with Autism functions in two distinct worlds: that of the school and that of home (Zigler, 1984). Programs should be implemented so that both worlds are affected positively. At school, the child accesses nondisabled peers and the general curriculum to the maximum extent appropriate. At home, the work done by parents and school-based professionals provide the child with access to activities preferred by the family (Wood, 1995). Having strong relationships between home and school allows for meaningful dialogue to occur, so that if conflict resolution must occur, a reasonable middle ground can more likely be found. (Feinberg & Beyer, 1999)

SUMMARY

Autism is a complex disorder that manifests through problems with (a) communication, (b) social interactions, and (c) repetitive displays of behavior. Autism is not a new disorder, although there has been a proliferation of research and theoretical work done in the area in the last 5 years. To best support students with Autism, school psychologists need skills in accurately identifying Autism, assessing the impact of behaviors associated with Autism on learning, and helping teachers and parents develop and evaluate programs to address the problem areas.

The acronym RIOT (Review, Interview, Observe, Test) helps to promote multi-method assessment needed to both (a) identify students as Autistic and (b) identify areas in which individualized programming will be needed. While there are published interviews and observational systems useful in diagnosing Autism, many of these instruments will require specialized training to learn to administer. Unstructured interviews can be used, as can direct observational methods familiar to most school psychologists. If academic skills testing is needed, published tests could be used. An alternative to published, norm referenced tests of achievement, direct assessment of academic skills using functional academic assessments can provide valuable information about student learning needs.

When developing programs for students with Autism, school psychologists need to understand what skills should be taught in a curriculum. Self-help, self-management, cognition, and play/social skills are areas often targeted. Structure is helpful in defining boundaries for children with Autism. Schedules help students understand when tasks start, and what to do or where to go when they have finished an activity. Functional assessment of challenging behaviors is helpful in identifying factors that can be changed in a setting, either before a behavior occurs or after the behavior occurs, so that a student is more successful in the setting.

Perhaps more than other categorical disabilities, Autism carries with it an "aptitude by treatment interaction" mentality. In other words, because the child is Autistic, *X* treatment should be implemented. There is a proliferation of unproven treatments in the area of Autism. School psychologists need information on these unproven treatments, so that they can effectively team with parents in identifying the most appropriate treatment for an individual learner with Autism.

School psychologists bring a variety of skills that can be helpful in supporting Autism. Collaboration, assessment, knowledge of childhood disorders, consultation, and evaluating treatment effects, all are necessary for ensuring that a child with Autism receives an appropriate program. Though the threat of legal action is daunting, a school psychologist with assessment and intervention skills, who supplements their skills by learning more of the specifics surrounding Autism, is an important source of information for the family of the child, a critical support for the teacher of the child, and, most importantly, an effective advocate for the child with Autism. While avoiding claims of "cures" or "recoveries" (Gresham & MacMillan, 1997), the school psychologist can ensure that the child with Autism receives an effective program.

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A data-based approach to programming and instruction is described. The manual offers an objective summary of research, including unproven. Chapters include a discrete trial curriculum, working with school-professionals and the school system, making program decisions based on data, and promoting language acquisition using verbal and augmentative systems.

O'Neill, R. E., Horner, R. H., Albin, R. W., Sprague, J. R., Storey, K., & Newton, J. S. (1997). Functional assessment and program development for problem behavior: A practical handbook. Pacific Grove, CA: Brooks/Cole.
Begins with theoretical underpinnings of functional behavioral assessment. Uses an indirect method of interviewing, combined with direct observation of the behavior and its antecedents and consequences, to support positive behavior by making problem behaviors irrelevant, inefficient and ineffective. Provides interview, direct observation, and behavior diagramming forms.

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After reading thoroughly the 14 chapters in this edited volume, the school psychologist should better understand how to team with teachers, parents, and speech and language pathologists in developing communication skills. There are suggestions for assessment of communication that link to intervention development for both verbal and augmentative communication.

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Sixteen chapters describing learning styles of students with Autism. "Part IV: Education and Treatment of Autism," contains chapters on structured teaching, cognitive development, strategies for enhancing socialization and communication, and using communication training to resolve problem behaviors.

AUTHOR NOTE

The author acknowledges the contributions of the Heartland AEA 11/Des Moines Public Schools Autism Resource Team. This team consists of Richard W. Tucker, Barbara E. Rankin, Ann Baird, Bindy Brown, Margaret Cook, John Drinnin, Marilyn Finn, Susan Guest, Patricia Hollinger, Mary Humke, Dee Sorenson, and David Wood. This multi-disciplinary team of dedicated professionals brings to life the reality of serving children with autism in public schools.

The present work was supported in part by Grant No. H024B960027 from the Office of Special Education Programs, U. S. Department of Education. The opinions expressed herein are those of the authors and should not be interpreted as having agency endorsement.

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Best Practices in the School Psychologist's Role in the Assessment and Treatment of Students With Communication Disorders

Melissa A. Bray, Thomas J. Kehle,
and Lea A. Theodore
University of Connecticut

OVERVIEW

In 1989, Telzrow guest edited an issue of *School Psychology Review* (SPR) on communication disorders in preschool and school-aged children. She stated that the special issue provides SPR readers with the state-of-the-art in children's communication disorders. Telzrow (1989) identified the following three themes that were consistent in the five articles that comprised the special issue: (a) communication disorders are pervasive in that they influence several areas of cognitive, academic, and social functioning, (b) assessment indices are limited when used with special populations and therefore may require alternative strategies, and (c) optimal intervention approaches should be long term allowing for emphasis on the children's relative strengths. The intent of this chapter is to summarize what we believe were the most relevant issues raised in the 1989 special issue and to supplement this information with recent advances in the identification and treatment of children's communication disorders relative to the practice of school psychology.

BASIC CONSIDERATIONS

Students that evidence communication disorders have been shown to be at risk for both academic and social/emotional problems (Cantwell & Baker, 1985). Therefore, school psychologists should be aware of the potential influences communication has on academic performance and social functioning with regard to assessment, consultation, and treatment.

Generally, communication disorders are categorized into the broad areas of speech, language, and hearing including central auditory processing disorders (CAPD). The American-Speech-Language-Hearing Association (American-Speech-Language-Hearing Association 1993) defines communication disorder as an impairment in the ability to receive, send, process, and comprehend concepts or verbal, nonverbal, and graphic symbol systems.

Speech disorders include articulation, voice, or fluency/stuttering. Articulation disorders are defined as a typical production of speech sounds characterized by substitutions, omissions, additions, or distortions that may interfere with intelligibility (American-Speech-Language-Hearing Association, 1993, p. 40). A voice disorder is defined by abnormalities of vocal pitch, loudness, duration, quality, and/or resonance. Fluency or stuttering is characterized by repetitions of sounds, words or phrases, sound or syllable prolongations, and/or blocking, which is the inability to move the lips or vocal folds to produce meaningful speech (American-Speech-Language-Hearing Association, 1993).

Language disorders include deficits in the areas of expressive language (speaking or writing), receptive language (listening or reading), or mixed expressive/receptive. According to American-Speech-Language-Hearing Association (1993), expressive and receptive language disorders may be composed of deficits in the following areas: (a) form of language including phonology (sounds and rules governing their combinations), morphology (the smallest segment of a word that denotes meaning), and syntax (grammar); (b) the content of language including semantics (meaning); and (c) function of language including pragmatics (social use of language).

Hearing disorders may impair the development, comprehension, and production of speech and language (American-Speech-Language-Hearing Association, 1993). Hearing disorders may be peripheral or central in nature. Peripheral hearing refers to impairments in actual hearing. Central auditory processing refers to deficits in the ability to process auditory stimuli (American-Speech-Language-Hearing Association, 1993).

BEST PRACTICES FOR LANGUAGE DISORDERS.

Out of all of the communication disorders previously outlined, language deficits are most pertinent to the role and function of the school psychologist. If the school psychologist observes deficits in expressive or receptive language in the areas of phonology, morphology, syntax, semantics, and pragmatics during a psychoeducational assessment, then he or she should (a) interpret these language impairments relative to the student's academic and social functioning and (b) refer the student for a speech and language evaluation. Unfortunately, it is often the case that referral and collaboration with speech language pathologists does not occur.

Generally, indicators of language impairment that may influence academic and social functioning that could be readily detected in the psychoeducational evaluation include the student's limited vocabulary, reduced knowledge of concepts, word-finding difficulties, poor grammar, difficulty with tasks that require memory, following directions, poor comprehension, auditory perception of words, pronunciation, story telling, nonverbal communication, and pragmatic language. In the preschool population, students with language disorders may evidence difficulty with play; counting; reciting the days of the week; colors; following one-, two-, and three-step directions; responding to direct questions; and comprehension of stories (Mercer, 1997).

Children with relatively milder language impairments may not be identified until third grade or later when the academic demands increase (Mercer, 1997). These elementary school students may have difficulty with reading because of impairment in their phonological processing skills. In addition, comprehension of textbook material, verbal expression, formulation, synthesis of ideas, and written language may also be impaired. In adolescence, these students may evidence difficulty with higher-level language such as figurative language, expository writing, listening to lectures, note-taking, and study habits (Mercer, 1997).

Language-Based Learning Disability

There is considerable empirical support for the relationship of language to learning and learning disabilities (LD) as evidenced by the inclusion of it as a criterion in the federal definition of LD. Forty-six percent of all students in special education are classified as learning disabled, 18% are classified as speech and language impaired (U.S. Department of Education, 1996), and it has been estimated that between 40 and 60% have both (Wiig & Semel, 1984). With respect to academic performance, students with language deficits often have the most difficulty with reading. It has been proposed that this is due to their poor phonological processing skills (Mercer, 1997).

Specific Language-Based Learning Disability in Reading

Reading is mainly based on phonological processing or the awareness of the language's sound structure. Phonological processing includes manipulation of sounds, rhyming, blending, segmentation, and deletion (Kaminski & Good, 1998). Furthermore, early language indicators of reading problems include difficultly with letter sound recognition, rapid naming of objects, words, memory, and speaking slowly.

The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) was developed as an assessment tool for school psychologists to use in order to identify preschool, kindergarten, and first-grade students who are at risk for reading failure (Kaminski & Good, 1998). The DIBELS assesses three areas: (a) phonemic segmentation fluency (i.e., the student is required to divide a word into sounds), (b) onset recognition fluency (i.e., the student is required to supply the first letter of a word as depicted in a picture), and (c) letter-naming fluency (i.e., the student is required to name the letters of the alphabet when presented in random order). The purpose of the DIBELS assessment is to identify students in need of early reading skills, to aid in treatment design, and to monitor progress (Kaminski & Good, 1998). Curriculum-based assessment (CBA) and curriculum-based measurement (CBM) would be the appropriate assessment choice for older students with reading difficulties. Finally, students with a language-based learning disability may not only evidence specific learning disabilities in reading, but also may reveal specific learning disabilities in the areas of written language, spelling, and mathematics, particularly with application and word problems.

Language and Social/Emotional Disorders

Students with language difficulties may also exhibit social and emotional deficits. This may be due to their impairment in pragmatic language as evidenced by difficulty with such skills as eye contact, turn taking, and adjusting to the listener's needs. These students also have difficulty joining conversations already in progress. In addition, they misinterpret social cues, have poor peer relations, are impulsive, hyperactive, and have difficulty judging the consequences of their behavior. These deficits in both language and social skills are often the harbinger of isolation from their peers (Mercer, 1997).

In support of the relationship between speech and language deficits and psychiatric disorders, Cantwell, Baker, and their colleagues, on the basis of several studies, found that speech and language impairments are associated with an increased prevalence of LD, attention deficit hyperactivity disorder (ADHD), autism, behavior disorders, anxiety, and depression. Furthermore, Beitchman, Cantwell, Forness, Kavale, and Kauffman (1998) noted that approximately 50% of students with language-learning disabilities also exhibited an Axis I psychiatric disorder.

Assessment of Language Disorders

Riccio and Hynd (1993) suggested indices that school psychologists should consider in the assessment of language disorders relative to the child's academic and social functioning. They included (a) the assessment of pragmatic language with the Test of Pragmatic Skills—Revised (Shulman, 1986) and the Interpersonal Language Skills Assessment (Blagden & McConnell, 1985). (Overall, with regard to pragmatic language, few measurement indices exist.) However, it is important to examine aspects of pragmatic language such as turn taking for speaking, topic management, and responding to and initiating response clarification.); (b) the assessment of adaptive behavior specific to social and communication skills with the Vineland Adaptive Behavior Scale (Sparrow, Balla, & Cicchetti, 1984) and the Behavior Assessment System for Children (BASC) (Kamphaus & Reynolds, 1992); and (c) the inclusion of a developmental interview to obtain information on hearing loss, family history of speech and language disorders, and relevant academic and behavior difficulties.

Furthermore, Downing (1989) described the difficulty in assessing language skills in students with severe multiple handicaps. He recommended, as an adjunct to standardized evaluation, the use of contextual communication assessment that involves the incorporation of the natural setting to accurately assess the communicative needs of the student within the social context. Allen (1989) also argued that formal assessment devices used for expressive language and comprehension are often inadequate and should be augmented with a spontaneous language sample.

Relatedly, Ganschow, Sparks, and Helmick (1992) recommend that in diagnoses, school psychologists, in addition to their traditional battery, should include indices of speech and language. Specifically, they stated that the Wechsler scales should not be the sole criteria for a speech and language referral. However, Sparks, Ganschow, and Thomas (1996) found that oral language, receptive vocabulary, and reading comprehension measures significantly contributed to the explanation of the variance in Verbal IQ on the Wechsler scales. Therefore, the Wechsler scales may offer some assistance in diagnosis of language disorders. However, other additional assessment is recommended. Aaron's (1991) suggestion that a diagnosis of a relative strength in the child's listening comprehension, relative to reading comprehension, could identify reading disabilities. This discrepancy would also suggest possible interventions based on phonemic awareness.

Interventions for Language Disorders

Telzrow, Fuller, Siegel, Lowe, and Lowe (1989) suggested that one of the roles school psychologists may play in treatment was as a consultant to assist the speech pathologists' delivery of services. Furthermore, the school psychologist's knowledge of behavioral and cognitive theories may be beneficial in collaboration with the speech pathologist in the design of language-based treatments.

Creaghead (1999) stated that outcome data are not available to demonstrate which strategies currently used for facilitating children's speech, language, and communication skills are most effective and efficient (p. 335). However, those treatments that are firmly based on behavioral or cognitive-behavioral theory appear most promising (Kehle, Madaus, Baratta, & Bray, 1998).

With regard to receptive language, the school psychologist can provide and reinforce strategies for comprehending written text such as paragraph restatement, story mapping, and creative dramatics. Paragraph restatement requires the student to pause after reading each paragraph and then orally summarize the content of the paragraph. Story mapping requires the student to depict the content read with key words or sentences. Creative dramatics refers to the student's interpreting and physically acting out the meaning of words, sentences, or whole stories.

With respect to listening comprehension, direction retelling, cognitive monitoring, and teaching vocabulary and concepts with a multimodal approach that provides the child with feedback and reinforcement have also been effective (Mercer, 1997).

In consideration of oral expressive language, the school psychologist could provide modeling for correct grammar, create increased opportunities for verbal responses, and have the child retell stories (Mercer, 1997). In addition, Mercer (1977) recommended that the addition of words to child's utterances and pictography promoted oral expressive language.

Specifically, with respect to the adding of words to the child's utterances, Bradshaw, Hoffman, and Norris (1998) employed a form of storybook reading that incorporated expansions and close procedures. The results indicated that the procedure promoted the children's responses to questions about the storybook, interpretations, and use of syntactically more complex language.

Pictography is a notational system that involves the creation of stories where the characters, settings, and sequences are represented by stick-figure drawings (Ukraninetz, 1998). Although focusing on oral narrative is crucial to promoting expressive language, it is difficult to remember, review, and revise. Narrative conveyed through pictography is substantially easier for the student to remember the content. This narrative-type intervention promotes understanding of sequence, quality, length, and clarity of content, substantially more so than simply having the student express themselves orally (Ukraninetz, 1998).

Story mapping, self-instruction, and word processing are the recommended strategies with regard to written expression. Story mapping can be used to outline the content that will eventually be expressed in writing. The student uses key words or sentences as a prompt to facilitate written expression. Self-instruction is defined as an intervention that employs a self-regulated strategy that includes prompts to facilitate the student's written expression. For example the mnemonic DARE, where D prompts determining your premise, A prompts assemble reasons to support your premise, R prompts reject arguments for the opposing view, and E prompts end with a conclusion (Graham & Harris, 1999).

With regard to pragmatic language, the school psychologist should recommend social skills training programs, specifically, modeling appropriate conversational skills, such as eye contact, topic maintenance, initiation, maintenance, and termination of conversation, and turn taking (Mercer, 1997; Riccio & Hynd, 1993). To a degree, these pragmatic language skills can be taught by having the student model appropriate social language. In addition, the uses of role playing and edited self-modeling videotapes have been effective in promoting social language skills (Kehle et al., 1998).

BEST PRACTICES FOR SPEECH DISORDERS

Articulation and Phonology

Articulation is defined as the correct pronunciation of developmentally appropriate speech. Articulation disorders may interfere with academic and social functioning (*Diagnostic and Statistical Manual of Mental Disorders* (4th ed.) (DSM-IV) (American Psychiatric Association, 1994). Furthermore, and most relevant to school psychologists, is recent research that has demonstrated that articulation disorders or lack of intelligibility of speech are related to difficulty in phonological processing and subsequently problems in reading (Mercer, 1997), writing, spelling, and mathematic abilities. It has been estimated that 50–70% of children with phonological disorders also have academic problems throughout their school years. When the student exhibits unintelligible speech, or evidence of a language impairment, the assessment of phonological awareness may be appropriate through the use of the Auditory Conceptualization Test–Revised (Lindamood, Bell, & Lindamood, 1992), or the Goldman-Fristoe Test of Articulation–2 (Goldman & Fristoe, 2000).

Phonology can also be assessed informally by presenting pictures that depict all consonants in the initial and final position in the word. Incorrect pronunciation of the speech sounds relative to the student's developmental age level should be noted (Mercer, 1997). Following this, a direct observation can be accomplished by taking a frequency count of correct speech productions of the target phoneme in a spontaneous speech sample during a 3–4-minute time interval (Diederick, 1971). Methods of direct observations and use of this information for progress monitoring is another area in which school psychologists could assist the speech pathologist in assessment and treatment. In addition, auditory discrimination can also be assessed informally. The student is presented with word pairs such as cat and hat and asked if the words are the same or different. Difficulty in auditory discrimination would be indicated by 10% or more inaccuracy (Mercer, 1997).

Interventions for Articulation and Phonological Disorders

Interventions designed to improve the student's articulation can involve the use of behavior programs that reinforce the student's correct pronunciation. A token economy with a response cost is one such classroom-based program that is relatively easy to implement.

Interventions designed for phonological deficits typically begin with auditory discrimination training. The school psychologist can address these deficits by incorporating auditory discrimination training (i.e., training student to hear differences between environmental sounds, letter sounds, etc.) into recommendations designed to improve the students' academic competencies. Phonological awareness may be enhanced by word segmentation, where the student identifies sounds and words, and blending exercises, where the student practices blending parts of words together. These could be included in recommendations for the treatment of reading.

Stuttering

As with children with language disorders, the speech disorder of stuttering has been associated with academic and social deficits (Bray & Kehle, 1996). This is tenable in that language disorders have been implicated in the etiology of stuttering. Also, as with language disorders, stuttering is related to depression and anxiety. Specifically, Blood and Seider (1981) stated that 68% of elementary school children who stutter also evidenced articulation, language, and emotional problems. The implication for school psychologists is that during assessment it may be beneficial to consider the co-occurrence of stuttering with emotional and academic problems.

Interventions for Stuttering

Some strategies that can be employed in collaboration with the speech pathologist involve relaxation paired with systematic desensitization, positive and negative reinforcement, timeout, successive approximations, differential reinforcement of other behavior, response cost, and habit reversal. Although these inventions have been effective in reducing stuttering, none has evidenced an enduring positive effect after cessation of intervention over the long term. However, one recently developed intervention for stuttering, self-modeling, has documented what appears to be a long-lasting positive effect for more than 2 years (Bray & Kehle, 2001). Self-modeling is defined as the multiple viewing of oneself on edited videotapes that depict exemplary behavior (Bray & Kehle, 1996). Bray and Kehle (1996, 1999) edited videotapes to portray students with stuttering disorders not stuttering in settings that were previously problematic.

Voice Disorders

Voice disorders are characterized by abnormal pitch, loudness, resonance, or duration (American-Speech-Language-Hearing Association, 1993). The causality of these voice disorders include such conditions as vocal nodules, which account for approximately 60% of hoarseness in children (Gray & Smith, 1996), tumors of the vocal tract, and muscular dysfunctions of the larynx. Although these voice disorders may influence academic and social functioning, they are almost exclusively addressed by speech pathologists. However, efforts for generalization of treatment gains can be supported by behaviorally based treatments designed and evaluated by school psychologists.

Hearing and Central Auditory Processing Disorders

Hearing impairments certainly influence speech and language skills. With respect to assessment, item difficulty on the WISC-III differentiates children with hearing impairments from children without hearing impairments, particularly on items that compose the Picture Completion, Information, Similarities, Vocabulary, and Comprehension subtests (Maller, 1997). Gibbins (1989) found that severely/profoundly hearing-impaired children achieve similar performance test scores as the standardization sample. In support of this, Braden (1992) stated that the use of special norms is perhaps not necessary for intellectual assessment of children with hearing impairments. Although audiologists and speech and language pathologists are typically responsible for assessment and intervention, collaboration with school psychologists may promote effective practice. Conversational skills, or pragmatic language, are problematic with children with hearing impairments. Furthermore, and probably because of this relative lack of pragmatic language, children often exhibit social skills deficits similar to those of children with learning disabilities and therefore may benefit from social skills training. Having the child role-play scenarios that focus on active communication and decision-making situations promote conversational speech (Johnson, 1997).

Central auditory processing disorders (CAPD) imply a disorder in the individual's ability to correctly process auditory stimuli. These disorders are not related to the individual's cognitive ability or the physiology of hearing. It is suggested that CAPD involve the individual's ability to correctly deal with acoustic stimuli, including decoding and attaching meaning to its contents (American-Speech-Language-Hearing Association, 1993). Formal testing is usually conducted by an audiologist and speech language pathologist. However, it has been suggested that this testing can function in the identification of a processing disorder with respect to learning disabilities. Finally, collaboration between school psychologists and speech pathologists is warranted based on Riccio and Hynd's (1996) reported similarities in etiology and symptomatology between children with ADHD and CAPD.

SUMMARY

The themes apparent in the communication disorders literature identified by Telzrow in 1989 are still evident: Communication disorders are pervasive in that they affect the student's cognitive, academic, and social functioning; assessment indices are limited and may require alternative strategies; and intervention approaches tend to be long term and emphasize the children's relative strengths.

With respect to all of the communication disorders, of most concern to the school psychologist is language impairment. Students with expressive and language disorders tend to have difficulty with reading. This is probably due to impairment in their phonological processing skills. In addition, verbal expression, formulation, synthesis of ideas, and written language may also be impaired.

Of the 48% of students in special education who are classified as learning disabled, 18% are also classified as speech and language impaired. Students with a language-based learning disability may evidence not only a specific learning disability in reading but also specific learning disabilities in the areas of written language, spelling, and mathematics. Therefore, it is recommended that school psychologists include an assessment of the child's language skills in their psychoeducational evaluations. The psychoeducational evaluation provides a unique opportunity to observe the child's language skills particularly in the areas of oral and written communication, auditory perception, understanding directions, pronunciation, and grammatical errors.

Perhaps because of their impairment in pragmatic language as evidenced by difficulty with such skills as eye contact, turn taking, and adjusting to the listener's needs, students with language difficulties may also exhibit social and emotional deficits. They may misinterpret social cues, are often impulsive and overactive, and have difficulty forming friendships and considering the consequences of their behavior.

Speech and language disorders are associated with an increased prevalence of co-morbid LD, ADHD, behavior disorders, anxiety, and depression. Furthermore, it has been noted that approximately half of students with language learning disabilities also exhibit an Axis I psychiatric disorder. Because of possible impairment in both academic and social functioning, school psychologists should minimally consider incorporating into their overall evaluation assessment of the student's pragmatic language and adaptive behavior, particularly with regard to social and communication skills. Also, the formal assessment of the student's expressive language and comprehension should be supplemented with a spontaneous language sample.

With regard to treatment, the school psychologist should consult and assist the speech pathologist's delivery of services. The school psychologist's knowledge of behavioral and cognitive interventions may be beneficial in collaboration with the speech pathologist in the design of language-based treatments.

In consideration of oral expressive language, the school psychologist could provide interventions that employ modeling correct grammar and increased opportunities for verbal responses. With regard to facilitating written expression, recommended interventions involve self-instruction and word processing.

Social skills training programs have been useful in helping children with communication disorders improve their pragmatic language. Such programs as outlined by Sheridan (1995) may be beneficial with these students. These include having the student model appropriate conversational skills and practice appropriate eye contact, topic maintenance, turn taking, and self-monitoring.

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Best Practices in School-Based Sexuality Education and Pregnancy Prevention

Adena B. Meyers and Steven Landau
Illinois State University

OVERVIEW

Sexual behavior among adolescents is linked to a variety of undesirable outcomes, such as unplanned pregnancy and exposure to sexually transmitted infections (STIs) including HIV. In this section we provide a brief review of recent trends and statistics relevant to adolescent sexual behavior and related social and health problems. As interested professionals are likely aware, behavioral and epidemiological data in this area are constantly being revised and updated. Thus, to keep abreast of the most current available information, readers are also encouraged to access the various internet sites listed at the end of this chapter.

Although the proportion of adolescents engaging in sexual behavior showed a slight decline during the 1990s, more recent evidence suggests that adolescent sexual activity has again begun to increase (Wilson, 2000). Moreover, despite a recent drop in adolescent pregnancy rates nationwide (Darroch & Singh, 1999), the United States still ranks alarmingly high among developed countries in rates of adolescent pregnancy, childbirth, and STI transmission (Panchaud, Singh, Feivelson, & Darroch, 2000; Singh & Darroch, 2000). Indeed, it is estimated that each year nearly 1 million adolescents in the United States become pregnant, and approximately 3 million contract STIs (Alan Guttmacher Institute, 1999).

These statistics are even more disturbing in light of the serious and often irreversible health and developmental consequences associated with adolescent pregnancy and STI infection. Close to 80% of adolescent pregnancies in the United States are unintended, with about 35% ending in abortion and more than 40% ending in unintended births (Henshaw, 1998). Intended or not, adolescent childbearing appears to be associated with a variety of deleterious outcomes for young mothers and their children. For example, adolescent mothers are more likely than their same-age peers to drop out of school, rely on public assistance, and report high levels of psychological distress (Coley & Chase-Lansdale, 1998). Pregnant adolescents are less likely than older women to obtain adequate prenatal health services, and are more likely to deliver pre-term and low birth-weight infants (Klerman, 1993). Ultimately, their children are at risk for a number of developmental problems including cognitive delay, school failure, and aggressive behavior (Coley & Chase-Lansdale, 1998; Furstenberg, Brooks-Gunn, & Morgan, 1987). Longitudinal evidence suggests that the negative consequences suffered by early child-bearers may diminish over time, but that the disadvantages observed in their children tend to persist and even increase as they grow older (Coley & Chase-Lansdale, 1998; Furstenberg et al., 1987).

While pregnancy can adversely affect an adolescent's life trajectory, STIs can be lethal. In 1998, HIV was the ninth leading cause of death among young people aged 15–24 in the United States (National Center for Health Statistics, 2000). In December 1998, there were more than 3,400 adolescents living with symptomatic AIDS in this country. However, owing to the virus' long latency period, almost all HIV-infected adolescents remain asymptomatic *and* *undetected* throughout their tenure in the school setting. Indeed, most of these students will not become aware of their HIV-positive status until later in adulthood. Unfortunately, the sexually active HIV-infected teen will be most contagious within 10 days following his or her first exposure to the virus (a time before the emergence of HIV antibodies). Thus, infected students who are sexually active with multiple partners can dramatically affect the epidemiology of this STI (Wodrich, Swerdlik, Chenneville, & Landau, 1999).

The most prevalent STIs among adolescents include chlamydia, gonorrhea, genital warts, and genital herpes. Although these diseases are generally not life-threatening, their symptoms can be extremely serious. If left untreated, chlamydia and gonorrhea may lead to Pelvic Inflammatory Disease (PID) and subsequent infertility in women. Genital herpes and genital warts are both caused by viruses. Although the symptoms are manageable, the viruses remain in the body indefinitely and thus may be passed on to future sex partners. Importantly, the presence of genital warts is associated with an increased incidence of cervical cancer, and both of these viruses may be transmitted to infants in the birth canal and lead to complications during childbirth (Moore & Rosenthal, 1993).

In light of these serious consequences, schools have been called upon to address the problems of early sexual behavior, adolescent pregnancy, and STI transmission by providing sexuality education and pregnancy prevention services. In a recent survey of U.S. public school administrators, the majority (69%) reported that district-wide policies require schools to offer sexuality education (Landry, Kaeser, & Richards, 1999). However, the definition and content of sexuality education varies considerably, particularly with respect to the relative emphasis placed on abstinence as opposed to contraception and other risk-reduction methods. In light of current diversity in practice, Landry et al. (1999) refer to three types of sexuality education policies: (a) *comprehensive* policies discuss abstinence as one option among many pathways to healthy sexual development; (b) *abstinence-plus* policies promote abstinence as the best option for adolescents, but effective methods of contraception and disease prevention are also addressed; and (c) *abstinence-only* policies present abstinence as the only acceptable option outside of marriage, and the discussion of contraception is either prohibited altogether or restricted to information about its failures and shortcomings.

The relative merits and drawbacks of these very different approaches have been the subject of political as well as scholarly debate. Recent legislative mandates favor an abstinence-only approach, yet little evidence of its effectiveness has ever been documented (Donovan, 1998). Regardless of which type of policy may be in effect in a given school district, practitioners are well aware of the enormous difficulty and challenge involved in any attempt to change adolescents' sexual behavior. Effective sexuality education and pregnancy prevention programs address phenomena that cut across multiple areas of functioning including health, mental health, cognitive development, and behavior change. Because of their training and experience relevant to each of these domains, school psychologists are in an excellent position to collaborate with a variety of other school-based professionals such as nurses, social workers, health educators, and guidance counselors in addressing these complex problems. School psychologists may be asked to contribute directly to the design and delivery of school-based pregnancy prevention and sexuality education, or they may be called upon to participate more indirectly, through consultation with parents, teachers, or other school personnel. In any case, it seems likely that school psychologists will become involved in these issues.

BASIC CONSIDERATIONS

Typically, prevention efforts target behaviors that lead to undesirable outcomes or are in themselves maladaptive. Substance abuse and violence, for example, because they cause harm and are considered problems in most if not all contexts throughout the life span, are appropriate targets for prevention. Sexual behavior makes a more complicated intervention target since it is not inherently dysfunctional. Some types of sexual behavior are associated with problems at all ages. Examples include unprotected intercourse with multiple partners or coercive sex with a reluctant or powerless partner. Clearly these behaviors are legitimate targets for prevention programs. In contrast, abstinence-oriented interventions seek to postpone, rather than prevent, behavior that emerges in the course of normal development. Indeed, proponents of such programs explicitly acknowledge that sexual intercourse between married, heterosexual adults is acceptable, even desirable. What is not always clear is how these efforts to prevent early sexual behavior fit into a more general understanding of normal, healthy, sexual development. Thus, school-based professionals involved in sexuality education and pregnancy prevention programs must reconcile personal values with community standards regarding child and adolescent sexuality and the school's role in addressing these inevitable events.

Sexual Development

Sexuality education and pregnancy prevention efforts should be informed by empirical evidence regarding normal sexual development in children and adolescents. In deciding on prevention targets and strategies, it is helpful to know which sexual behaviors are normative among various populations at various ages. The notion that sexuality unfolds over the course of the lifespan, beginning in infancy or early childhood, remains somewhat controversial but is certainly not new. Researchers and scholars have been discussing and describing childhood and adolescent sexuality since the eighteenth century, if not earlier (Money, 1997).

Today, we know that sexual behaviors, such as masturbation and exploratory play with same-sex or opposite-sex peers, are common among young children (Starks & Morrison, 1996). For example, interview data indicate that 49% of boys and 32% of girls have masturbated by the age of 13, and that many begin doing so in early childhood (Arafat & Cotton, 1974). Furthermore, Crooks and Baur (1993) surveyed parents and found that more than 75% had observed their six- and seven-year-old children engaging in some form of sex play with other children. The types of sex games that are considered normal at this age involve looking at or touching another's genitals. However, inappropriate sexual behavior in a child may be a sign of sexual victimization (Kendall-Tackett, Williams, & Finkelhor, 1993). Behaviors such as oral-genital contact, insertion of objects into the vagina or anus, and imitating intercourse are relatively uncommon among prepubescent children and may be cause for concern (Berliner & Elliott, 1996).

During adolescence, the incidence of masturbation increases, particularly among boys, while sexual behavior with a partner begins to take on more mature forms. With respect to masturbation, Sorenson (1973) found that among adolescents older than 15, 70% of boys and 42% of girls had masturbated at least once. Meanwhile, heterosocial interaction increases as adolescents start spending more of their free time with members of the opposite sex. Among younger adolescents, sexual experimentation often occurs in a group context and may involve kissing games such as "spin the bottle." Older adolescents are more likely to participate in paired dating, which typically involves progressively intimate forms of sexual expression (Starks & Morrison, 1996). The progression generally unfolds over several years and follows a predictable pattern, from kissing, to fondling breasts, to genital petting, to intercourse (Moore & Rosenthal, 1993).

While this pattern captures the experience of the majority of American teens, there is evidence of variation within the population. For example, African-American adolescents often engage in intercourse prior to genital petting (Smith & Udry, 1985). Additionally, during adolescence a substantial minority of young people becomes aware of sexual and romantic attraction to members of their own sex. Remafedi, Resnick, Blum, and Harris (1992), for example, found that 10.7% of the high school students they surveyed were unsure of their sexual orientation, 4.5% reported they were primarily attracted to members of their own sex, 0.7% identified themselves as bisexual, and 0.4% as homosexual. Finally, it should be noted that some adolescents elect to remain virgins. Michael, Gagnon, Laumann, and Kolata (1994) report that as many as 5.8% of females and 8.3% of males wait until age 20 or older before initiating intercourse. The above summary offers unambiguous implications for the school psychologist: We must be knowledgeable of child and adolescent sexual development from a normative perspective and realize that various cultural or ethnic subgroups within the population may differ in terms of what is considered normative.

INTERCOURSE

Over the past several decades, the average age at first intercourse has declined while the average age of marriage has increased, thereby contributing to an overall increase in the prevalence of premarital intercourse. For example, Michael et al. (1994) found that 84% of women born between 1933 and 1942 were either virgins or had only had intercourse with one partner when they reached the age of 20, but among women born after 1953, one-half reported having multiple partners by the age of 20. Recent evidence indicates that intercourse among adolescents in the United States, which had been on the rise during the 1970s and 1980s, appears to have stabilized or declined slightly during the 1990s. Still, adolescents are considerably more likely to have sex now than they were 50 years ago. The median age at first intercourse is 16.5 years for adolescents in the United States (Warren et al., 1998), and by age 18 approximately two-thirds have had sex (Alan Guttmacher Institute, 1999).

Adolescent sexual behavior is influenced by a variety of contextual variables. Research reveals that intercourse is probably indicative of social and behavioral problems for some adolescents while it may be a sign of healthy and prosocial development for others. For example, Small and Luster (1994) found that experience with intercourse increases with age and with the presence of a steady boyfriend or girlfriend. In other words, as adolescents mature and enter into exclusive dating relationships, they are more likely to have sex. On the other hand, the same study also revealed that intercourse is associated with alcohol use, low parental monitoring, poor grades, and sexual abuse history. Thus, sexual activity appears more common among adolescents with developmental and behavioral difficulties. Other predictors of adolescent sexual behavior include the perception that peers are having sex (Romer et al., 1994), permissive parental values (Small & Luster, 1994), delinquency, and physical abuse history (Stoiber & Good, 1998).

Intercourse is relatively uncommon among younger adolescents in this country. Before age 13, only 9.4% of boys and 4.5% of girls have had intercourse. However, there exists considerable regional and ethnic variation in these data. For example, in some states, fewer than 4% of young people initiate intercourse before age 13, while in other states more than 20% do so. Also, African-Americans tend to experience intercourse earlier than members of other ethnic groups. This is particularly true of African-American boys, more than half of whom have had intercourse by the age of 14 (Centers for Disease Control and Prevention, 1998; Warren et al., 1998).

These patterns suggest that the developmental significance of early intercourse may depend on the context in which it occurs. Nevertheless, research indicates that early intercourse is generally associated with a variety of psychosocial problems. For example, there is evidence that adolescents with histories of sexual victimization and substance use initiate intercourse earlier than their peers (Mott, Fondell, Hu, Kowaleski-Jones, & Menaghan, 1996; Stock, Bell, Boyer, & Connell, 1997). Also, it appears that many adolescents are coerced into early sexual encounters they do not want. For example, one recent study of 15- to 24-year-old women found that nearly one-fourth of the respondents whose sexual debuts occurred before age 14 reported their experience was not voluntary (Abma, Driscoll, & Moore, 1998).

In summary, school-based practitioners interested in sexuality education and pregnancy prevention must contend with the complexity and diversity that characterize sexual development. Broadly defined, sexual behavior occurs normally throughout childhood and adolescence. In one sense, then, the prevention of adolescent sexual behavior is neither practical nor advisable. However, certain types of sexual behavior, such as sexual intercourse, appear to be maladaptive among some young people in certain contexts. Moreover, while intercourse is normative among older adolescents, it is relatively uncommon among younger teens. Taken together, these observations suggest that adolescents who are likely to engage in sexual intercourse at an early age may benefit from preventive services of some kind. However, given that norms for early sexual behavior appear to vary considerably across subgroups, prevention strategies that are effective and appropriate with one group of young people are unlikely to be equally useful in all contexts. Moreover, it would be a mistake to assume that circumscribed programs aimed at the prevention of early intercourse will ultimately lead to improvements in other areas such as academic achievement and family functioning, and it is highly unlikely that such programs will alleviate the problems associated with a pre-existing history of sexual victimization. Instead, comprehensive preventive efforts that simultaneously target several of these developmental problems may be the most beneficial. Finally, focused interventions have the potential to reduce negative health outcomes that can be caused by discrete behaviors such as unprotected intercourse. We turn now to a discussion of these problems.

The Politics of Preventing Sexual Behavior

In the field of prevention science, few topics are fraught with political and moral undertones and heated debate as those related to the sexual behavior of American adolescents. We have all heard that adolescent pregnancy has reached epidemic proportions, that our teens are in danger of contracting and spreading life-threatening diseases, and that these problems are somehow tied to the moral decay of society and the deterioration of cherished institutions such as marriage, family, and religion. It has been posited by some (e.g., Reppucci, 1987) that the political atmosphere surrounding this topic has clouded our understanding of the relevant issues and may even interfere with efforts to improve outcomes for adolescents. For example, Fine (1988) argues that the public discourse on adolescent sexuality has been limited in its focus on the potentially violent and dangerous elements of sexual behavior, and on certain moral issues, to the exclusion of any discussion of the developing sexual desire that virtually all humans experience as they approach adulthood. Typically, one finds in a sex education curriculum "...(1) the authorized suppression of a discourse of female sexual desire; (2) the promotion of a discourse of female sexual victimization; and (3) the explicit privileging of married heterosexuality over other practices of sexuality" (Fine, 1988, p.30). Female students are not perceived as active sexual agents but as sexual victims devoid of normally developing sexual drives. Inherent in this sexuality-as-violence perspective is the presumption of a causal relationship between official silence regarding student sexuality and a decrement in sexual activity (i.e., if we don't teach about sex, it will not occur) (Fine, 1988).

According to Fine (1988), a curriculum that attends to female sexuality should encourage female students to consider what feels good and what does not, what is desirable and warrants pursuit versus what should be avoided, and these should be discussed in school in the context of individual sexual experience and needs. This approach to sex education is designed to release females from their traditional, passive role in which they are recipients of other people's sexuality to one in which they initiate and negotiate their own sexual behavior based on assessment of pleasure and a cost-benefit analysis. It is obvious this "discourse of desire" is rarely found in U.S. classrooms. Indeed, even though polls throughout the nation indicate that 80–90% of adult respondents support the notion of sex education in schools (with components addressing disease prevention through contraception), most school boards are under intense pressure to ensure the curricular focus on teen pregnancy prevention is through abstinence-only education (Donovan, 1998).

The silencing of this discourse is exemplified in a variety of recently developed programs and policies that may fly in the face of common sense. For instance, Donovan (1998) describes several abstinence-only programs that rely on scare tactics. One curriculum includes a video that attempts to silence desire by telling students that if they want to have premarital sex, they'll "just have to be prepared to die." The Welfare Reform Act provides funding for abstinence-only interventions that promote "a mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity" (DiClemente, 1998, p. 1574), and as of March 1998, 20 state legislatures had enacted abstinence-only sex education bills (Donovan, 1998). Given that most Americans do not marry until their mid twenties or later, this standard is clearly unrealistic, and simply ignores the sexual desires of many mature adults. In recent memory, however, the discourse of desire was most decisively silenced when U.S. Surgeon General M. Joycelyn Elders, M.D., was fired by President Clinton after she made the provocative remark that "...masturbation is something that is a part of human sexuality, and is a part of something that perhaps should be taught" (i.e., as a way to reduce the spread of AIDS) (see Zytkow, 1995, for details). Clearly, many believe that school-based sex education should not address masturbation. School administrators and teachers are feeling intense pressure regarding the debate about these controversial issues, and school psychologists may be in the best position to assist in the resolution of this conflict.

Unfortunately for practitioners, these examples illustrate that what is politically viable may conflict with what is scientifically and logically justifiable. In attempting to intervene on behalf of the health and well being of young people, one may run into formidable obstacles in the form of political, religious, and moral concerns about adolescent sexuality. In an ideal world, we would simply recommend the selection of interventions on the basis of empirically supported effectiveness. However, we recognize that this recommendation is not practical in all contexts, and that political considerations do influence intervention choices. A prevention program may be scientifically "proven" to reduce pregnancy, STIs, or early intercourse, but if its methods are not acceptable to some concerned and vocal parent groups, students, administrators, and community leaders, then its effectiveness will be greatly compromised.

On the other hand, political decisions are sometimes made on the basis of faulty assumptions about majority opinion. For example, there is ample evidence that most parents want their children to be exposed to sexuality education that includes information about STI prevention and contraception (e.g., Algozzine, Berne, & Huberman, 1995; Donovan, 1998), yet many administrators and practitioners may be afraid to implement such programs because they believe parents would complain. In light of these concerns, it seems particularly important that school-based practitioners become informed about what types of interventions their constituents (e.g., parents, students, teachers, administrators, community leaders) want and what they will tolerate. Professionals who are thus informed, and familiar with a variety of intervention strategies, will then be able to select techniques with adequate empirical support as well as social acceptability.

Potential Aptitude-by-Treatment Interactions

The importance of promoting norms that are appropriate to the target audience underscores the general notion that the effectiveness of a given prevention strategy is likely to vary depending on the context in which it is implemented and the characteristics of the participants. What follows is a discussion of several factors that might moderate the effectiveness of different prevention methods.

DEMOGRAPHIC FACTORS

Factors such as age, gender, and ethnicity influence adolescent sexual behavior and should thus be taken into consideration when selecting and developing prevention strategies. For example, there is evidence that older adolescents are more likely than those under age 14 to show improvement in contraceptive use following preventive interventions (Franklin, Grant, Corcoran, Miller, & Bultman, 1997). This result suggests that the age of participants should be taken into account in deciding whether and how to present information about safer sex practices. Gender also plays an important role in sexual risk-taking, which indicates girls and boys may have different problems and different intervention needs. For example, depression is associated with early sexual involvement and nonuse of birth control in girls, but not in boys (Kowaleski-Jones & Mott, 1998). Thus, girls may benefit from strategies aimed at improving their emotional functioning while boys may respond better to other approaches. Ethnicity and cultural context are important because of their influence on norms regarding early sexual behavior and sexual risk-taking. For instance, Newcomb and his colleagues demonstrated that Latina women who are more acculturated to life in the United States engage in more risky sexual behaviors than their less acculturated peers. Importantly, acculturation status was a better predictor of sexual behavior than a number of theoretically derived variables based on the health belief model (Newcomb et al., 1998). This finding implies that certain theory-driven interventions may not be universally applicable.

SEXUAL EXPERIENCE

Common sense suggests and evidence confirms that some strategies will work better with sexually experienced youth while others will be more effective with adolescents who have not yet initiated intercourse. For example, in their evaluation of an abstinence-oriented program for young teens, Howard and McCabe (1990) found their program effective in delaying the onset of intercourse among sexually inexperienced students, but ineffective for those students who were already sexually experienced at baseline. Intuitively, one should assume that sexually experienced students will not relate to interventions that stress abstinence. This notion is corroborated by findings from a study comparing the efficacy of an abstinence-oriented intervention to that of a safer sex intervention (Jemmott, Jemmott, & Fong, 1998). Sexually experienced students showed a greater reduction in intercourse frequency and unprotected intercourse if they were exposed to the safer sex intervention rather than the abstinence-oriented intervention.

It should also be noted that sexual victimization history may influence students' responses to prevention programs. Sexual victimization is associated with earlier initiation of intercourse and more risky sexual behavior (Stock et al., 1997). This suggests that children who have been victimized may be in need of more intensive prevention interventions. Furthermore, it is possible that students who have been previously forced to engage in sexual behavior may not respond to programs that emphasize self-control and personal responsibility pertaining to abstinence or safer sex practices. It may be particularly difficult (yet particularly important) to increase self-efficacy among this group of students.

OTHER POTENTIAL FACTORS

Other factors that may moderate intervention effectiveness include personal experience, academic performance, parent-child relationship variables, religious affiliation, and sexual orientation. Students who are personally familiar with problems such as STIs and adolescent pregnancy may have different responses to preventive interventions relative to their peers. If they have witnessed the effects of AIDS, for instance, they may be more readily motivated to take protective measures. Students who are having academic difficulty in school may not respond as well to traditional classroom-based instructional methods, and school attendance problems could interfere with participation in school-based programs. Furthermore, adolescents whose parents do not monitor their behavior may show more reduction in sexual risk-taking if interventions successfully engage their parents' participation. Students who are affiliated with religious organizations may respond best to programs that promote values and group norms consistent with their religious beliefs. Finally, although it is important for sexually active gay, lesbian, and bisexual youth to adopt safer sex practices, they may not relate well to programs that assume all participants are heterosexual. In general, it would be a mistake to adopt any intervention strategy without first considering the impact of these and other potential intervening variables.

BEST PRACTICES

In recent years, several authors have reviewed research on interventions aimed at adolescent pregnancy prevention (Franklin et al., 1997; Frost & Forrest, 1995) and sexual risk-reduction (Kirby et al., 1994), drawing conclusions about specific programs that have been shown to be effective and the characteristics that differentiate these from less effective approaches. Key findings and conclusions of these reviews are summarized below:

SEXUALITY EDUCATION

One aim of many preventive interventions is to increase adolescents' knowledge about sexuality. This often involves presenting information about physical maturation, reproduction, contraception, and STIs (specifically, symptoms and transmission mechanisms). Although it is well documented that educational efforts can effectively increase adolescents' sexuality-related knowledge, it is also recognized that young people do not change their sexual behavior on the basis of knowledge alone (Schinke, Forgey, & Orlandi, 1996). Nevertheless, effective interventions do tend to include educational components that provide accurate information about risks associated with unprotected intercourse and methods to avoid these risks (Frost & Forrest, 1995; Kirby et al., 1994), suggesting that increased knowledge may be a necessary but not sufficient ingredient in the prevention of unsafe sexual behavior. Kirby et al. (1994) also observe that effective programs tend to use active learning techniques to present sexuality information. Examples include group discussions, role-playing, and *in vivo* skill practice (e.g., going to stores or clinics to practice accessing birth control and prophylactics). Gilchrist, Schinke, and Blythe (1985) point out that actively involving adolescents in the learning process helps them personalize the information that is presented.

A concern about sexuality education raised in many communities is that teaching young people about sex and birth control may convey the message that it is acceptable to initiate intercourse during adolescence, thereby increasing the rates of early sexual behavior. Available evidence suggests that this concern is clearly unfounded. For example, Kirby et al. (1994) examined eight programs with sexuality education components and found that none of these led to increased frequency of intercourse among participants. Similarly, Franklin et al. (1997) conclude that pregnancy prevention programs do not significantly increase rates of sexual activity, and this is the case regardless of whether the programs emphasize abstinence or sexuality education.

ACCESS TO CONDOMS AND OTHER CONTRACEPTIVES

Frost and Forrest (1995) point out that the majority of effective pregnancy prevention programs provide access to contraceptive services, often through school-based or school-linked clinics. Consistent with this, Franklin et al. (1997) conclude that programs which provide information about *and access to* contraception are more successful than other programs if increasing contraceptive use to reduce pregnancy is the objective. The same concerns that have been raised about sexuality education are also relevant here. Indeed, distributing birth control in schools is a highly controversial strategy, often thought to condone and promote early sexual behavior. However, the research indicates that providing adolescents with access to contraception does not result in increased sexual activity. For example, Schuster, Bell, Berry, and Kanouse (1998) report that after condoms were distributed in an urban high school, the rate of intercourse among students remained stable while the rate of condom use among sexually active students increased.

INTERPERSONAL SKILLS

Many effective programs include training in interpersonal skills that are of particular relevance to sexual risk reduction. These include decision making, negotiation, communication, and refusal of sexual advances. (Frost & Forrest, 1995; Kirby et al., 1994). Effective training generally involves modeling, instruction, and various types of skill practice.

INTERVENTION SETTING

Prevention programs that target sexual behavior are often delivered in schools or community-based clinics or hospitals. Some involve widespread community participation, while others are more circumscribed and may only involve classroom instruction. In their description of effective pregnancy prevention programs, Frost and Forrest (1995) identify effective school- and clinic-based curricula, as well as successful approaches for school/community agency collaboration. Their analysis suggests that effective programs may be conducted in a variety of settings, and that many effective programs are school-based. However, the results of Franklin et al.'s (1997) meta-analysis indicate that community-based and clinic-based programs are more effective than school-based programs in increasing adolescents' use of contraception. These data suggest that collaboration with community agencies, such as health clinics, business leaders, religious organizations, and parents, may facilitate school-based prevention efforts.

INVOLVING PARENTS

Interestingly, in many of the prevention programs examined in these reviews, the involvement of parents is minimal or nonexistent. This omission seems particularly salient in light of evidence that parent behaviors such as monitoring and communication are important predictors of adolescent sexual risk-taking (e.g., Romer et al., 1994; Small & Luster, 1994). It seems plausible that prevention efforts might be enhanced if parents were to play a greater role. Possible strategies could include educating parents about their potential influence on their children's sexual behavior, training parents to increase their ability to monitor their children's behavior, or providing sexuality education to parents, which might enhance their confidence about discussing sex and birth control with their adolescents.

ROLE OF VALUES

In general, effective programs are not value-neutral. Kirby et al. (1994) argue that this is one of the most salient differences between effective and ineffective programs. Instead of encouraging students to make individually based decisions about sexual behavior, effective programs take a clear stand regarding what is and is not appropriate, and they actively seek to shape group norms. Frost and Forrest (1995) conclude that effective programs specifically emphasize abstinence as the best way for adolescents to avoid unwanted pregnancy and STIs. This may seem surprising or even contradictory given the role that birth control information and access apparently play in program effectiveness. However, many effective interventions simultaneously advocate abstinence and sexual responsibility. They teach that abstinence is the best choice, but they also encourage adolescents to practice safer sex should they chose to become sexually active.

Importantly, the relative emphasis placed on abstinence as opposed to safer sex varies from program to program. Kirby et al. (1994) point out that effective programs promote the norms and values appropriate for the specific population they target. For example, an intervention aimed at middle-school students who are predominantly virgins places the most emphasis on abstinence (Howard & McCabe, 1990), while interventions aimed at high-risk teens who are predominantly sexually experienced stress condom use and other risk-reduction strategies (e.g., St. Lawrence, Jefferson, Alleyne, & Brasfield, 1995; Walter & Vaughan, 1993).

SUMMARY OF EFFECTIVE STRATEGIES

Since the effectiveness of any particular prevention strategy is likely to depend on a variety of contextual factors, it seems potentially misleading to identify a set of "most effective" program characteristics. What is most effective in one context might be quite ineffective in another. However, some general patterns emerge from the above discussion, and are worth summarizing. In general, school-based practitioners are advised to consider the following program components and strategies (see Kirby et al., 1994, for a similar list of key program characteristics):

- Theoretical basis: Effective programs tend to be theory-driven. Many rely on social learning theories, which emphasize the role of social influences (e.g., peers, mass media), and personally relevant knowledge about risks and risk-reduction strategies.

- Access to contraception: Although some school districts may not allow this, effective programs tend to facilitate (in one way or another) students' access to condoms and/or other contraception methods.

- School versus clinic setting: Evidence is mixed regarding which location is best, but if increased contraception/condom use is a central goal, and school-based distribution of these items is not feasible, then collaboration with school-linked clinics, or community-based preventive services should be considered.

- Sexuality education: Although education alone does not change sexual behavior, it is a prerequisite for behavior change according to most theoretical models. The majority of effective prevention programs include sexuality education components.

- Interpersonal skills training: Effective programs tend to provide training in skills such as communication, negotiation, and refusal.

- Active learning and skill practice: Effective programs tend to offer opportunities for students to participate actively in the learning process and to practice skills in simulated (e.g., role-play) or real-life situations.

- Question of values: Effective programs emphasize values that are appropriate to the needs of the target audience (e.g., abstinence versus safer sex). There is evidence that a totally value-free decision-making approach is less effective than one that presents clear messages about sexual responsibility (Kirby et al., 1994).

- Involving parents: Obviously, parents play an important role in shaping their children's behavior in general and sexual development in particular. Practitioners should consider creating opportunities for parents to participate and collaborate in the selection, development, and implementation of prevention programs.

Recommendations for Selecting Prevention Programs

NEEDS ASSESSMENT

Before adopting an intervention approach, a careful assessment should be conducted to determine the specific sexual risk-reduction needs of the community and any potential obstacles that may interfere with efforts to address these needs. One of the first steps in this process is to identify relevant stakeholders and potential collaborators. At a minimum, these should include students, parents, and school personnel. Other possibilities include health-care providers, public health officials, owners of businesses (particularly those who sell condoms and other contraceptives), religious figures, and other community leaders. Donovan (1998) recommends setting up an advisory board of various school personnel and community members. This strategy will facilitate collaboration, and increase the chances that decisions about prevention goals and intervention methods represent the opinions of various constituent groups.

A number of critical questions should be addressed in the needs assessment. One important goal is to learn as much as possible about the political feasibility of various sexually oriented interventions in the local context. Additionally, it is important to gather information about the sexual norms and behaviors of students in the target population, and relevant contextual variables, such as family composition, ethnicity, and socioeconomic status of community members. It would be useful to determine what (if any) gaps exist in relevant knowledge and resources among parents, teachers, students, and the community in general. Data relevant to all of these questions could be generated by conducting surveys or focus group interviews. Additionally, review of relevant records will prove beneficial. Public health statistics regarding rates of unintended pregnancy, abortion, and STIs among adults and adolescents in the community should be reviewed, and data gathered from reproductive health-care providers to determine the extent to which adolescents are already accessing such services.

DEVELOPING GOALS AND SELECTING INTERVENTION STRATEGIES

Information collected during the needs assessment should be used to develop prevention goals appropriate for the community. These goals may relate to specific behaviors (e.g., "increase the proportion of students who wait until age 16 to initiate intercourse" or "decrease the average number of sexual partners that sexually active students report having") or to more general outcomes (e.g., "reduce the rate of adolescent pregnancy") or both. Ideally, the goals will be relevant to the community's needs, and acceptable to its members. Intervention strategies should then be selected that are likely to be effective with respect to the prevention goals and the characteristics of the participants. The model programs described above provide examples of the variety of approaches presently available. Practitioners may choose to adopt one of these models or combine various elements of several different programs.

In cases where community norms are potentially dysfunctional, a school-based practitioner may need to consider implementing a politically unpopular intervention. For example, in a community with high rates of early sexual behavior and STIs, the best practice might be to negotiate with or (if necessary) work in opposition to a vocal community leader who objects to any discussion of condoms with students. In such instances, it may be necessary to educate the community about the seriousness of the risks, and the results of studies demonstrating that educating students about birth control and safe sex does not lead to increases in sexual behavior. In some circumstances, creative solutions may be called for. For example, if it is not politically feasible to discuss sexuality issues with students, then information about the prevalence of adolescent sexual behavior and the risks associated with it can be provided to parents, along with training in how to communicate with their children about these issues.

ASSESSMENT OF PROCESS AND OUTCOME

Process and outcome assessment should accompany the delivery of any intervention. In the case of prevention programs aimed at the delay or modification of sexual behavior among adolescents, several issues ought to be addressed. Throughout the intervention, the integrity and acceptability of the prevention strategies should be repeatedly assessed. Assessment of intervention effectiveness should focus on whether and to what extent original goals are being met, and should include outcome data beyond student self-report. For example, public health statistics regarding adolescent pregnancies, abortions, and STIs could be examined and compared to pre-intervention rates. Results of both process and outcome assessment should be communicated to community members. For example, a newsletter about the intervention could be sent out at regular intervals to parents and students. Also, local media could be invited to cover the intervention and its results. In some cases, as information about the successes and failures of an intervention come to light, goals may need to be revised and the adoption of new strategies may be warranted.

SUMMARY

In light of continuing concerns regarding adolescent pregnancy and STI transmission, schools are being called upon to deliver sexuality education and pregnancy prevention programming in many communities. Because school psychologists are knowledgeable about health, mental health, cognitive development, and behavior change, they are in an ideal position to contribute to the development and implementation of these interventions. Thus, it may be helpful for school psychologists to know that effective programs tend to be theoretically grounded, provide access to contraception, provide accurate information about sexual health and development, emphasize the development of interpersonal skills, and emphasize appropriate values. In addition, pregnancy prevention and sexuality education efforts may be enhanced through increased parent involvement. School psychologists should select intervention strategies with sensitivity to a variety of (often conflicting) concerns including evidence of intervention efficacy, information about normative sexual development, and community needs and values. Finally, ongoing assessment is recommended to ensure these interventions are implemented in a consistent and effective manner.

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This paper addresses several of the political issues that influence the delivery of preventive sexuality education services in schools. The author provides useful information and advice for practitioners interested in implementing such services.

Franklin, C., Grant, D., Corcoran, J., Miller, P. O., & Bultman, L. (1997). Effectiveness of prevention programs for adolescent pregnancy: A meta-analysis. *Journal of Marriage and the Family, 59*, 551–567.

This study examines the results of 32 published evaluations of adolescent pregnancy prevention programs, focusing on the effects of such interventions on sexual activity, contraceptive use, and pregnancy. The meta-analytic strategy allows the authors to make generalizations about the effects of interventions on these three outcome variables, and to examine the roles of several possible moderating factors such as participant demographics, type of intervention (i.e., abstinence-only versus sex education with no contraception versus sex education with contraceptive knowledge-building and distribution), and locus of intervention (i.e., school vs. community).

Frost, J. J., & Forrest, J. D. (1995). Understanding the impact of effective teenage pregnancy prevention programs. *Family planning perspectives, 27*, 188–195.

This paper focuses on five empirically supported adolescent pregnancy prevention programs (including the School/Community Program for Sexual Risk Reduction Among Teens and the PSI curriculum described in this chapter). The authors present details about each intervention and its evaluation, and draw conclusions about elements that appear to be common among effective programs.

Kirby, D., Short, L., Collins, J., Rugg, D., Kolbe, L., Howard, M., Miller, B., Sonenstein, F., & Zabin, L. S. (1994). School-based programs to reduce sexual risk behaviors: A review of effectiveness. *Public Health Reports, 109*, 339–360.

This review examines the findings of a variety of empirical studies addressing the effects of school-based programs aimed at pregnancy prevention, sex education, and/or STI prevention. Seven of the studies reviewed assess the effects of sex education through national surveys of adolescents, and the other 16 studies are experimental or quasi-experimental evaluations of specific prevention programs (including the PSI and AIDS-preventive curricula described in this chapter). The authors provide details about each of the 16 interventions and evaluations, and they compare the characteristics of effective and ineffective programs.

WEBSITES RELATED TO PREGNANCY PREVENTION AND SEXUALITY EDUCATION

The following internet resources offer current information that may be useful to school psychologists interested in school-based pregnancy prevention and sexuality education.

Alan Guttmacher Institute <www.agi-usa.org>

This site provides access to fact sheets and reports summarizing recent statistics about adolescent sexuality and pregnancy. It also offers, a full-text version of the current issue of *Family Planning Perspectives*.

Centers for Disease Control and Prevention <www.cdc.gov>

Information about health promotion, disease prevention, and epidemiological data compiled by the CDC may be downloaded from this site.

Planned Parenthood Federation of America <www.plannedparenthood.org>

This site contains up-to-date information about contraceptive technology, relevant legal developments (particularly regarding abortion laws and policies), answers to frequently asked questions about sexual health, and information targeted specifically at adolescents. It also provides a list of local Planned Parenthood agencies.

Sexuality Information and Education Council of the United States (SIECUS) <www.siecus.org>

This site offers an array of comprehensive sexuality education resources for adolescents, parents, educators, religious groups, and others.

AUTHOR NOTE

Portions of this chapter previously appeared in Meyers, A. B., & Landau, S. (2000). Preventing early sexual behavior: Sociopolitical issues and the design of empirically supportable school-based interventions. In K. Minke & G. Bear (Eds.), *Preventing school problems– promoting school success: Strategies and programs that work* (pp.299–336). Bethesda, MD: National Association of School Psychologists.

97 Best Practices Working With Students Using Assistive Technology

Julia E. McGivern
Brian C. McKevitt
University of Wisconsin-Madison

OVERVIEW

School psychologists are increasingly called upon to work with students using assistive technology (AT). AT is a broad term used to describe a range of devices and services (Individuals with Disabilities Education Act (P.L. 101-426) 20 U.S.C. Chapter 33. Amended by P.L. 105-17, June, 1997) that can be used with students with limitations in communication, motor control, sensory skills, and learning abilities. These devices and services are intended to enhance students' ability to express needs, learn, demonstrate knowledge, function socially, and achieve success. School psychologists may become involved with AT when assessing a student's skills, planning interventions, working on IEP teams, or consulting with other school professionals and parents. Knowledge of the different types of AT available to students and issues associated with the use of AT is crucial for making informed decisions about student placement, programming, and progress.

More than 1,000 new AT products are introduced every year (Blackstone, 1996). Consequently, "it is impossible for one person or group of people to be familiar with all the technology options currently available"(Scherer & Galvin, 1996, p. 2). *Most school psychologists are not AT experts, nor do they need to be.* However, school psychologists must be prepared to work in collaboration with other school staff members, families, and students themselves to meet the needs of students who use AT. In this chapter, we present information intended to assist school psychologists in providing services to all students. We describe legal mandates and ethical standards pertaining to AT, describe the roles school psychologists may fill while working with students using AT, outline considerations for selection and use of AT in assessment, and focus specifically on AT designed to assist students with communication. We have chosen to focus on AT for communication because this is a technology domain with which many school psychologists interact in the course of direct and indirect service to students with disabilities. Also, please note that because technology is changing so rapidly, we have included few brand name product examples. Please refer to the ABLEDATA resource in the annotated bibliography for current technology availability.

BASIC CONSIDERATIONS

Laws Related to AT

Several federal statutes address the provision of AT in schools. The Technology-Related Assistance for Individuals with Disabilities Act of 1988 (Pub. L. No. 100-407) states that AT devices and services must be available to people with disabilities. The Individuals with Disabilities Education Act incorporated language from the Technology Act and applied it to educational services. IDEA defines AT broadly as both devices and services (see Table 1).

IDEA regulations state that "each public agency shall ensure that AT devices or AT services, or both, are made available to a child with a disability if required as part of (a) special education, (b) related services, or (c) supplementary aids and services" (34

Table 1. Selected Assistive Technology Definitions and Provisions in IDEA

Assistive Technology Device

The term "assistive technology device" means any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of a child with a disability (IDEA, 20 U.S.C., §602, 1997).

Assistive Technology Service

The term "assistive technology service" means any service that directly assists a child with a disability in the selection, acquisition, or use of an assistive technology device. Such term includes (a) the evaluation of the needs of such child, including a functional evaluation of the child in the child's customary environment; (b) purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices by such child; (c) selecting, designing, fitting, customizing, adapting, applying, maintaining, repairing, or replacing of assistive technology devices; (d) coordinating and using other therapies, interventions, or services with assistive technology devices, such as those associated with existing education and rehabilitation plans and programs; (e) training or technical assistance for such child, or, where appropriate, the family of such child; and (f) training or technical assistance for professionals (including individuals providing education and rehabilitation services), employers, or other individuals who provide services to, employ, or are otherwise substantially involved in the major life functions of such child (IDEA, 20 U.S.C., §602, 1997).

Use Of Assistive Technology Across Settings

On a case-by-case basis, the use of school-purchased assistive technology devices in a child's home or in other settings is required if the child's IEP team determines that the child needs access to those devices in order to receive FAPE [free appropriate public education] (34 C.F.R. §300.308, 1999).

C.F.R. § 300.308, 1999). When deemed part of special education and necessary for provision of a free and appropriate public education (FAPE), AT devices and/or services are addressed in IEP goals and objectives. Goals and objectives may relate to activities accomplished via AT or to training and use of AT itself. As clarified in IDEA regulations (1999), the use of school-owned AT must be available for the student in settings outside the school if the AT is necessary for the student to receive FAPE (see Table 1).

IDEA 1997 also contains provisions for the inclusion of students with disabilities in statewide and district-wide assessments, stating that "children with disabilities are included in statewide and district-wide assessment programs, with appropriate accommodations and modifications in administration if necessary" (34 C.F.R. § 300.138, 1999). *Testing accommodations* are changes in the way a test is administered or responded to that are intended to offset or correct for distortions in scores that may be caused by a student's disability (McDonnell, McLaughlin, & Morrison, 1997). If participation in general assessment is not appropriate, even with accommodations, an *alternate assessment* must be developed to measure a student's progress (34 C.F.R. 300.138, 1999). Elliott, Kratochwill, and Schulte (1999) identified AT, such as text-talk converters (text-to-speech software), speech synthesizers, visual magnification devices, or auditory amplification devices, as potential accommodations on standardized tests or alternate assessments.

Ethical Standards Related to AT

In addition to legal mandates for using AT, there are ethical obligations school psychologists must meet that pertain to the use of AT. NASP's *Principles for Professional Ethics* (National Association of School Psychologists, 1997) states that school psychologists advocate for their students and they speak up for the needs and rights of their students (National Association of School Psychologists, 1997, Introduction). School psychologists need an understanding of AT devices and services to advocate for students in need of them. Furthermore, school psychologists "are committed to the application of their professional expertise for the purpose of promoting improvement in the quality of life for students, their families, and the school community" (National Association of School Psychologists, 1997, III.A.1.). This mandate describes an ethical responsibility held by school psychologists to use their knowledge to help enhance the well being of *all* children, including children using AT. Finally, school psychologists must use technological devices when appropriate to improve the quality of client services (National Association of School Psychologists, 1997, IV.C.7).

Types of AT

A wide range of devices and services may be considered AT. The complexity of these devices can vary widely. Low technology devices are often simple to use, have few moving parts, and can be handmade. Examples of low technology assistive devices are pencil grips, crutches, adaptive pointers, and communication boards. High technology devices are often computerized or motorized and require a higher degree of skill and/or training on the part of the student to use. Powered mobility devices and some computerized devices would be considered high technology assistive devices.

AT devices may be used by students with mild or severe disabilities who have limited communication, cognitive skills, motor control, vision, or hearing. Students may use AT tools for daily living activities (such as personal care, eating, environmental control), seating and mobility, academics, transportation, sensory needs, recreation, and communication (e.g., Galvin & Scherer, 1996). Students with learning disabilities, such as reading and writing disabilities, may use computer software to assist in learning to read (e.g., Torgesen & Barker, 1995) and write (e.g., De La Paz, 1999).

Roles of the School Psychologist with Students Using AT

School psychologists act as problem solvers in schools, formulating problems, identifying potential solutions, and testing selected alternatives (Deno, 1995). As a function of their diverse roles within a school and district, school psychologists may interact with students who use AT in a variety of ways. The brief case examples below illustrate several roles assumed by school psychologists in which knowledge about AT is critical.

CASE 1

Chris is a five-year-old boy with severe cerebral palsy who has just entered kindergarten. Chris has limited motor control and speech. He uses a wheelchair for mobility and indicates yes/no via head movement. Chris's parents are wondering whether Chris is ready for a more sophisticated communication system. The school district's AT team has asked the school psychologist and speech/language pathologist to evaluate Chris's cognitive and communication skills to help in developing an appropriate communication system. The kindergarten teacher is uncertain about the level of Chris's literacy skills.

As illustrated in the example of Chris, the school psychologist may be called upon to evaluate the skills of a student not yet using AT. In this case, the psychologist may need to understand how to use low-level technology to interact with the student and how to evaluate specific skills the student may require in using more advanced technology. To accomplish these tasks, the school psychologist must first understand how to assess Chris's current level of performance (e.g., cognitive, communication, academic). In addition, because the school psychologist is being asked to provide information to help *select* AT devices for use at the completion of the evaluation, the school psychologist must understand factors that influence selection of AT.

CASE 2

J.T. is a fourth grader at his local elementary school. He sustained a traumatic brain injury when he was hit by a car while riding his bike two years ago. J.T. is learning to use a sophisticated augmentative communication system, but his teacher does not understand how the device works. The educational assistant who works with J.T. received some training with the device and often helps J.T. complete his assignments and tests. The teacher is not sure how much work J.T. is doing independently. She is frustrated because she is not sure what J.T. knows and where to target her instruction. She has asked the school psychologist, who serves on the school's AT team, for assistance with assessment (including the state-mandated fourth grade tests) and instructional planning.

In the example of J.T., the school psychologist is asked to consult with a teacher about a student already using AT to ensure that instruction is appropriately matched to the student's skills and to facilitate assessment. To address these questions, the school psychologist must understand how the student's use of AT relates to IEP goals and must consult with the teacher about the AT. The school psychologist is also a member of the AT team, which facilitates the selection and implementation of assistive devices. In this case, the school psychologist needs to understand the student's needs and skills and must be familiar with the range of AT devices available.

CASE 3

Maria is a tenth grader whose family is moving from one school district to another in the state. Maria is quadriplegic from a diving accident and uses AT for mobility, personal care, and communication. Her former school district is loaning her assistive devices to her new school while the staff reviews Maria's needs and obtains AT for her. The school psychologist is the Local Education Agency (LEA) representative on the IEP team.

In Maria's case, the school psychologist is asked to fulfill an administrative role on the IEP team. In this role, the school psychologist must be knowledgeable about system issues, such as cost, resources, and training needs related to AT.

Different roles may require different types of knowledge about AT. Types of AT knowledge needed by school psychologists include:

- Familiarity with the range of AT tools available
- Understanding of how to use specific devices
- Understanding of specific student skills and preferences affecting device use
- Awareness of family and cultural issues affecting AT use
- Understanding of technology issues (e.g., transportability, safety)
- Understanding of system issues (e.g., cost, training)

Direct service roles, in which the school psychologist evaluates the skills and instructional needs of a student, often require the psychologist to interact with the student's AT. The psychologist needs to understand the function of AT devices the student uses (e.g., positioning and communication AT) that support the student's performance in school. When the school psychologist is evaluating the student's need for AT or is assisting in determining appropriate AT for a student, the school psychologist must be familiar with the types of AT available for consideration and the student skills required to use the device. To fulfill *indirect service roles*, such as administrative roles as in the case of Maria, the school psychologist must understand system factors that influence AT selection and use. Table 2 identifies questions the school psychologist may address to guide practice across direct and indirect service roles with students using AT.

BEST PRACTICES

Considerations for AT Selection

One role school psychologists fill in school districts is membership on AT teams seeking to identify appropriate AT for a student. Numerous authors (e.g., Parette, 1998; Parette & Marr, 1997; Scherer & Galvin, 1996) have identified domains to consider in selecting appropriate AT, including student factors, family issues, cultural perspectives, technology features, and system issues.

STUDENT FACTORS

To identify appropriate AT, the AT team must first consider the needs, skills, and preferences of the student. AT must be matched to the purpose(s) of its use. Clear identification of purposes the technology will serve is the starting point for identifying useful AT. What exactly do you want to enable the student to do?

A second critical question is what skills and needs does the student exhibit that affect AT use. Many forms of AT require specific student skills (e.g., cognitive, motor, perceptual) to employ the AT effectively. Examples of these skills are presented in Table 3. School psychologists are often highly qualified to help assess student skills. A helpful evaluation tool for assessing these skills is included in the Wisconsin Assistive Technology Initiative (1998) resource manual.

Third, what are the student's preferences regarding AT? Some students are eager to increase their independence and will use whatever device allows them to function more independently. Some students are concerned about the appearance of some devices (e.g., head pointers). Some students are willing to use higher technology devices (such as computers) but are unwilling to use lower level devices (such as communication boards) and vice versa. Some students are reluctant to use any device that singles them out from their peers.

FAMILY ISSUES

Family preferences and values will also influence whether an AT device is appropriate for a student and the extent to which it will be used out of the home to provide FAPE. An appropriate AT device

Table 2. Questions to Guide Practice Across School Psychologists' Roles With Students Using AT

Direct Service Roles

Assessment and Intervention With Students Using AT

- What AT does the student use and why?
- What is the goal of the assessment/intervention? Can the AT help me attain my goal?
- What exactly do I want the student to do? Does the AT help the student do it?
- What preferences does the student have about AT use?
- Can I communicate reliably with the student?
- Would additional/alternative AT facilitate the student's demonstration of skills?
- What training would the student require to use additional/alternative AT?
- Do I need AT training to work effectively with the student using the AT?
- What other professionals can I consult who have expertise about AT?

AT Selection With Students in Need of AT

- What skills (e.g., motor, cognitive, language, sensory) does the student have?
- What does the student need to be able to do that he or she cannot do without AT?
- How will AT facilitate attainment of IEP goals?
- What AT devices/services might help the student accomplish goals?
- What specific devices are being considered for the student?
- What skills does the student need to use these devices?
- How do the student and family feel about these devices?
- Are there cultural issues that will affect AT selection and use?
- What system issues might influence selection of AT?
- What will the student's back-up AT system be?
- How might the student's needs change over time?

Indirect Service Roles

Consultation With Families and Teachers of Students Using AT

- What are the concerns of the student? Family? Staff? Does AT relate to these concerns?
- What AT does the student use now? Can the student use the AT? Independently?
- Does the AT facilitate attainment of IEP goals and participation in classroom, school, and community activities necessary for FAPE?
- Do the family and teachers understand how to use the AT?
- What student, family, and teacher preferences regarding AT use must be considered?
- Do the student, family, or teachers need AT training?
- How might the student's needs change over time?

Administrative Roles (e.g., IEP team LEA Representative)

- What AT does the student use now?
- What AT devices and services are required for FAPE for the student?
- What needs do student, family, and teachers report that are not met with current AT?
- What are the student, family, and teacher preferences regarding AT use?
- Will the student's needs for AT change over time?
- What AT options might be considered for the student?
- What funding sources are available for the AT?
- What LEA resources must be committed to support the student's AT use?
- What are the legal/ethical requirements regarding AT device and service provision?
- How will student, family, and staff training needs be met?
- How will transitions affect student AT needs and resources?

addresses the concerns of the family for the student and does not disrupt family functioning (Parette, 1998). If a family views a device as too cumbersome or if a device increases the family's stress, then it likely will not be used.

CULTURAL PERSPECTIVES

The cultures of both the family and the school must be considered in selecting appropriate AT. As ethnic, racial, cultural, and linguistic diversity of the U.S. school population increases (e.g., IDEA, 1997),

Table 3. **Student Skills Related to AT Use**

Student Domains	*Examples of Factors to Consider*
Communication skills	Use of speech and gestures; reliability of communication; comprehension; initiation skills; AT use; specific skills (e.g., pointing, eye gaze, scanning)
Cognitive skills	Cause and effect; representational skills; symbol use; means-end reasoning; sequencing skills; memory; reading level; math level
Visual skills	Acuity; glasses; visual fields; perception; color vision; visual tracking; peripheral vision
Auditory skills	Acuity and range of frequencies (left and right ears); sensitivities to sounds; amplification/aids; interference of background noise
Motor skills/motor control	Spasticity/tremor; voluntary motor control (e.g., arm/hand, head, foot control); overflow movements; handedness
Medical/physical needs	Alertness; fatigue; seizures; eating/drinking needs; Medications/side effects; Toileting needs; Drooling
Positioning needs	Head control; trunk control; table/chair height; physical supports; positioning of materials
Attentional skills	Alertness; fatigue; attention span; distractibility; interests; motivation
Social-emotional needs	Reactions to familiar/unfamiliar people/situations; supports; temperament; interests; reinforcers; dislikes; co-occurring disorders (e.g., depression, anxiety)

education professionals are becoming more aware that families from varied backgrounds may hold different views of disability, education, professional assistance, and technology (e.g., Hourcade, Parette, & Huer, 1997). Parette and Marr (1997) have identified questions to ask to ensure that cultural issues have been addressed prior to selection of an alternative or augmentative communication (AAC) device. These include (Parette & Marr,1997, p. 344):

- Do I understand the family's values, beliefs, customs, and traditions?
- Do I understand the family's attitude regarding disability?
- Does the family accept the idea of assistive technology as a tool to help their child?
- Have I identified important social influences which might affect children or family perception and use of AAC devices?
- Do I understand how the family feels about making direct contact with professionals involved in AAC decision making?
- Have I included the extended family in the AAC assessment process?

Parette and Marr (1997) also note the critical importance of recognizing that many cultures do not value independence and self-sufficiency, which are often goals of the use of AT devices, to the degree that Euro-American cultures do. Some cultural groups may wish to provide direct care and support for their children with disabilities, and they may value the guidance of community or religious leaders more than that of education personnel.

Finally, school professionals, including school psychologists, must examine their own cultural backgrounds, values, and assumptions (e.g., Arredondo et al., 1996). Are these values and assumptions in concert with those of the family? Do these values and assumptions interfere with communication with the family or result in judgments that alienate families?

TECHNOLOGY FEATURES

A steadily increasing array of assistive devices is available today to meet the needs of students with disabilities. Parette (1997) has identified examples of technology features and issues to consider when choosing among available options, including, the following ones: How well does the device address the

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student's needs and enhance the student's performance? How transportable is the device? How broad/limited are its uses? How easy and comfortable is the device to use? How dependable and durable is the device? Are repair services readily available? How costly are the device and its maintenance? Is the device safe? How does it compare with alternatives?

SYSTEM ISSUES

In addition to student, family, culture, and technology factors, there are also school system issues to consider in selecting AT. Two of the most critical system issues to consider are training and funding (Parette, 1997). Many assistive devices require significant training for the student, family, and professional staff interacting with the device. Students may require extensive training over time to understand complex features of sophisticated devices. Teachers, parents, and others, including school psychologists, who interact with the student also need training to understand how the technology can facilitate student performance and how to support and encourage the student's use of the technology. Too often, inadequate training is available to help students, families, and staff members take full advantage of the possibilities AT can provide. Scherer and Galvin (1996) recommend using a spiral curriculum in which training begins by focusing on familiar features of a device or piece of equipment. As training continues, novel features are introduced.

Funding is also a factor that must be considered in AT selection (Smith, 1998). Some low technology devices (e.g., eye gaze frames, head pointers) are very inexpensive and can often be made by school personnel. Other higher technology devices (e.g., computers and mobility devices) are very expensive. Cost of assistive devices must always be considered within the context of student use. To what degree will the device facilitate student performance? If a device significantly increases a student's performance, then it is easier to justify higher cost than if a device only marginally facilitates performance. As computer availability and miniaturization continue (Vanderheiden, 1996), costs of higher technology devices will fall.

Considerations in AT Use in Educational Assessment and Intervention

Traditionally, school psychologists have spent a high proportion of their time in schools in assessment activities (Wilson & Reschly, 1996). However, the focus of assessment is increasingly on its link with intervention and outcomes to produce improved learning and behavior (e.g., Reschly & Ysseldyke, 1995). School psychologists, through assessment and intervention activities, interact directly as problem solvers with students; that is, with students using AT, that means direct interaction with the student's technology, particularly communication technology.

Specific issues and concerns often arise when school psychologists conduct assessment and intervention activities with students using communication AT. These include (a) use of appropriate assessment tools, (b) the fit between the student's AT and goals of the activity, (c) reliability, (d) validity, (e) examiner bias, (f) reporting findings, and (g) collaboration. These are discussed below.

USE OF APPROPRIATE ASSESSMENT TOOLS

When assessing the skills of a student who uses AT, the school psychologist must determine the types of assessment tools that will yield the most useful information. This range of tools includes record reviews; interviews of the student, teachers, and family; observations of the student across settings; rating scales; analogue measures (e.g., CBA); teacher-constructed probes; authentic work samples; and standardized, norm-referenced measures. Each of these tools can contribute important information about a student's strengths and needs. The task of the school psychologist is to determine which tools will provide the most guidance for intervention with the student.

THE FIT BETWEEN THE STUDENT'S AT AND THE ACTIVITY GOALS

Sometimes a student's AT does not allow the type of communication or performance most suited to a particular assessment or intervention activity. For example, many communication devices are intended to *expand* the student's overall communication (initiation, commenting, replying, etc.). However, in many assessment activities (with students with and without disabilities) the examiner *limits* the communication opportunities of the student (e.g., true-false and multiple-choice exams) to allow sampling of content, to facilitate comparisons across students, and to increase reliability. When working with students using AT, the school psychologist must evaluate the type of response he or she wants the student to make and determine whether this response is possible using the student's AT. If not, what alternatives—in both assessment tools and AT—are available? Could the school psychologist rely more on observational data? Interview data? Constructed probes?

RELIABILITY

Reliability here refers to the consistency of the student's responses or performance on a task and the examiner's interpretation of performance. All performance varies somewhat across trials, but our goal, particularly in assessment activities, is to limit error variance which reduces usefulness of measures (Joint Committee on Standards for Educational and Psychological Testing, 1999). Use of communication AT has the potential of introducing error in the assessment process if, for example, the student and/or examiner are not adequately familiar with the AT or if the examiner cannot reliably interpret the responses of the student. As stated in the *Standards for Educational and Psychological Testing*, "precision and consistency in measurement are always desirable. However, the need for precision increases as the consequences of decisions and interpretations grow in importance" (Joint Committee on Standards for Educational and Psychological Testing, 1999, pp. 29–30).

VALIDITY

Systematic errors in assessment affect the validity of measurement (Joint Committee on Standards for Educational and Psychological Testing, 1999). When working with students using communication AT, the school psychologist must attend to possible sources of systematic error, such as observation or interview conditions, test administration conditions, or language levels. In addition, the psychologist must be aware that use of communication AT often places additional cognitive, perceptual, and motor demands on the student (Blackstone, 1996). These demands may increase the difficulty of a task such that comparisons with students not using AT are not valid.

EXAMINER BIAS

At times, interpreting responses of students using AT can be difficult. For example, a student using an eye-gaze frame may have only brief eye pointing. The psychologist must be aware of the potential for bias introduced in such situations and use strategies to reduce bias. These include, for example, completing assessment over longer time periods to avoid student fatigue, using multiple forms of assessment, or investigating alternative AT.

REPORTING FINDINGS

Findings must be described in sufficient detail to assist others in recognizing factors that facilitate and limit the student's performance. For example, what were environmental conditions during observations of student success? When assessment administration procedures are altered to accommodate the student's communication mode, access, and AT, it is critical for the school psychologist to report such modifications and consider their effects on interpretations of results.

COLLABORATION

As was stated earlier, most school psychologists are not AT experts. Other professionals, such as physical, occupational, and speech/language therapists, have the training and expertise necessary to meet the needs of many students using AT. Family members also have important information to contribute to evaluation and intervention plans. Working as part of a team addressing the AT needs of the student will increase the school psychologist's effectiveness.

AT for Communication

School psychologists must be able to use augmentative communication devices to carry out direct service roles with students. Communication with students with disabilities can be as simple as talking or as complex as interacting through a sophisticated computer. Blackstone (1996) defines communication as "exchanging, transmitting, and receiving information, thoughts, feelings, and ideas" (p. 97). For communication through an assistive device to be effective, the communication partner (sometimes the school psychologist) must be knowledgeable about the communication process and any devices and strategies the student uses.

Communication Modes and Access

Interpersonal communication includes communication through speech and gestures, reading and writing, and communication via assistive strategies and devices. For individuals who cannot use speech, communication *access*, the way in which the individual selects messages (Blackstone, 1996), is a critical consideration. Communication device access includes two primary strategies: *direct selection*, in which the student indicates by pointing to, looking at, touching or picking up, an item from a set of items; and *scanning*, in which a student selects a desired item from a series of items presented auditorally or visually in a predetermined order. Each of these access modes has certain uses and limitations and issues that arise with their use. Types of communication modes and access, examples, and issues specific to each are summarized in Table 4.

SPEECH AND GESTURES

Most people use speech and gestures to communicate. Sometimes students with disabilities (e.g., cerebral palsy) are able to use speech and gestures, but their speech may be difficult to understand and their gestures imprecise because of limited motor control. Issues that arise in communicating with students with limited motor or speech skills include, for example, reliability (*Can the communication partner reliably interpret the student's responses?*), student fatigue (*Is it tiring for the student to talk or use gestures?*), and time (*How much time does it take to communicate by speech and/or gestures?*). Students sometimes use speech to activate assistive devices, such as environmental control of lights, TV, and computers.

READING AND WRITING

Students with learning disabilities and those with physical disabilities can benefit from voice-activated and speech-recognition software (e.g., De La Paz, 1999). Reading skills can be enhanced via speech synthesis, which allows the reader to hear text read aloud (e.g., Erickson & Koppenhaver, 1998). Speech-to-text transcription products and spelling devices can be used to assist students with writing disabilities.

DIRECT SELECTION

By using direct selection, a student indicates choice of an item from an array of items. Direct selection may take several forms, as discussed below.

Pointing. The student manually points to an object, picture, symbol. *Example: The classroom teacher is concerned about whether the student, who has limited expressive language, understands basic preschool concepts such as between, under, and next to. The school psychologist administers a concept measure that requires only a pointing response.* This form of direct selection is used frequently with low technology communication tools, such as communication boards and books. These devices are usually constructed in response to specific needs and skills of the student. Issues to consider with students using manual pointing include

- Reliability: How precisely can the student point? How clear is the selection?
- Positioning of the student and materials: Where should materials be placed to allow the student access to them? How far apart do the materials need to be to facilitate reliable choice-making? What position should the student be in to select reliably from the array?
- Fatigue and physical pain: How tiring/painful is it for the student to point to his or her choice?

Eye Gaze/Eye Pointing. The student indicates a selection from an array by pointing with his or her eyes. *Example: A school psychologist is helping the teacher assess the student's ability to distinguish among initial consonants. Together they create several sets of words from the student's classroom materials (e.g., mat, sat, cat, hat). The school psychologist displays the sets one at a time on the student's eye gaze frame. She asks the student to look at the word that says, for example, "cat."* Direct selection via eye gaze or pointing is a useful communication access mode for some students with limited motor control and limited speech. The reliability of eye gaze responses may be increased with an assistive device called an eye-gaze frame. This device, which can be made or is available for purchase, usually consists of a simple frame approximately 17" x 22" which supports a clear piece of plastic or polycarbonite vinyl. The communication partner attaches the array of items to the corners of the frame allowing ample space between them. The eye gaze frame is placed at eye level for the student, who looks at all the options available and then looks at his or her selection. The communication partner looks through the clear plastic to read the student's response. A limitation of eye pointing as communication is that it often requires initiation by the communication partner (e.g., in selecting and dis-

Table 4. Types of Communication Access With Examples and Associated Issues

COMMUNICATION ACCESS	*EXAMPLES*	*COMMUNICATION ISSUES*
Speech/Gestures: Student uses limited speech and/or gestures to communicate		
• **Speech:** e.g., single words such as yes, no • **Gestures:** e.g., head nod/shake; eye gaze to indicate yes/no	• Student communicates without AT, but may require partner to elicit communication • Communication partner asks yes/no questions or questions requiring brief responses or gestures	• Intelligibility of speech • Reliability of interpretation by partner • Student fatigue • Time
• **Voice Activated Systems:** student activates assistive technology via speech	• Voice activated environmental control systems (e.g., lights, TV, computer)	• Training • Cost
Reading and Writing: Student uses AT to assist in reading and writing communication activities		
• **Dictation, Speech Recognition, Speech Synthesis, and Spelling Aids:** computer software recognizes speech, produces text from speech, and/or produces speech from text; spelling tools aid written language activities	• Speech recognition software to produce text (e.g., *Naturally Speaking*, Dragon systems) • Word prediction software (e.g., *Co:Writer*, Don Johnston) assists in writing tasks • Speech synthesis allows readers to hear text read aloud (e.g., *Write OutLoud*, Don Johnston) • Spelling tools (e.g., *Franklin Bookman Dictionary and Thesaurus*, Franklin Learning Resources)	• Fatigue and health (e.g., voice clarity) • Portability • Training • Student preferences • Cost
DIRECT SELECTION: Student directly indicates a selection from a set of items		
• **Pointing:** student points to objects/pictures placed in front of him/her	• Objects/pictures placed on a surface (e.g., feltboard) • Communication boards (e.g., can be made using *Boardmaker*, Mayer-Johnson) • Foam core strip with Velcro	• Reliability • Precision of pointing • Positioning of student and materials • Student fatigue
• **Eye Gaze/Eye Pointing:** student makes choices from an array by looking at objects/pictures	• Eye gaze frame (e.g., can be made from PVC pipe and clear plastic) • Object board (e.g., can be made by attaching objects to a display using Velcro) • Communication book (e.g., can be made using *Boardmaker*, Mayer-Johnson)	• Reliability related to duration and accuracy • Positioning of student, materials, partner • Examiner bias • Student fatigue • Time • Availability of materials
• **Assisted Direct Selection:** student uses a device to facilitate selection of an item from a set of items	• Finger pointers (e.g., a piece of PVC pipe) • Head pointers • Light/laser pointers (e.g., baseball cap with small flashlight attached)	• Reliability • Motor control (e.g., head control) • Positioning of student and materials • Student preferences

• **Augmentative and Alternative Communication Devices:** student accesses a communication device through physical contact with the device (e.g., touching a button, typing, depressing a switch) or without physical contact (e.g., using eye gaze to activate a switch, using a light pointer, using voice recognition software)	• Simple voice output devices: student selects a message from several choices (*Voice-in-a-box*, Frame Technologies; *Cheap Talk*, Toys for Special Children; *BIGmack*, AbleNet) • Layering devices: device stores sets of messages in layers (e.g., *MaCaw*, Zygo Industries, Inc.) • Icon sequencing devices: student selects series of icons to produce a message (e.g., *Touch Talker*, *Liberator*, Prentke Romich; *Chatbox*, Saltillo) • Dynamic display: pictures are presented on a computer screen; student selects series of screens to produce a message (e.g., *DynaVox*, Sentient Systems Technology)	• Cognitive skills • Reliability • Independence • Issues related to specific access mode (e.g., eye gaze, pointing • Portability of device • Cost
Scanning: Student selects desired item from a series presented auditorally or visually in a predetermined order		
• **Assisted Manual Scanning:** partner indicates (e.g., by pointing to or speaking) items one at a time. Student indicates choice when desired item is presented	• Communication partner offers a series of items/choices; student indicates selection by saying yes/no or nodding/shaking head as each item/choice is presented	• Reliability • Bias • Student fatigue • Time
• **Specific Scanning Technologies:** devices designed specifically to facilitate scanning	• Device presents items in sequence; student stops device (e.g., by depressing a switch when selected item is presented; *Compartmentalized Clock Communicator*, Toys for Special Children)	• Cognitive skills • Limited applicability • Portability • Training
• **Computer-Based Scanning:** computer device presents arrays of choices. Items may be presented in linear or group format. Student selects desired item (e.g., by depressing a switch, using eye gaze, remote mouse, or pointing) when it appears	• Step scanning: student controls presentation of each item by depressing a switch (e.g., using *EZ Keys* software, Words Plus, Inc.) • Inverse scanning: student depresses switch to activate scanning and releases switch when desired item appears • Linear format: device presents items sequentially; student selects desired item when it is presented • Group format: device highlights items in groups (e.g., rows and columns or quadrants); student selects group containing desired item; device then presents each item in group (e.g., *ClickIt!*, IntelliTools) Student independence	• Cognitive skills • Student and staff training • Portability of device • Time • Cost • Training

Notes. Communication access categories based on Blackstone (1996); Lynch, Moehn, and Walser (1997). Tools identified in this table are examples. For a comprehensive listing of AT tools and devices, please see www.abledata.com.

playing the items in the array). Considerations in the reliable use of eye gaze and pointing include

- Visual acuity: What size materials, background, or color will facilitate vision?

- Duration of eye pointing: How long can the student look at an item?

- Positioning of student, partner, and materials: How should the student be positioned to facilitate good head and eye control? How far apart do materials need to be positioned?

- Student fatigue: How tiring is this form of communication access for the student?

- Time: How long does it take to identify and set up items for the array and obtain student responses? Can the student use other forms of access that require less time?

- Bias and/or error: Are the student's responses clear enough that there is reliability across communication partners?

Assisted Direct Selection: The student uses a device to facilitate selection of an item from a set of items. *Example: The school psychologist is buying lunch for his student advisory team today. One student uses a light pointer to indicate which of three sauces she wants with her chicken strips.* Students may be able to select a choice from an array with the assistance of a low technology device, such as a head pointer, finger pointer, or light pointer attached to a hat. In communicating with students using assistive pointing devices, the following considerations arise:

- Motor control: How well can the student control the device. For example, does the student have adequate head control to use a head pointer?

- Positioning of student and materials: What is the optimal position for the student to be in when using the device? Where should materials be placed to increase reliability?

- Reliability: Can the partner consistently read the student's selection?

- Student preferences: Is the student willing to use the device?

Switch Access. Many students with severe motor impairments use switches to activate AT. *Example: A student depresses a switch mounted on his headrest to access his computer and respond to the teacher's question.* Switches can be attached to simple voice output devices or to computers to allow access; and switches can be placed on a laptray or mounted on a wheelchair to be activated by hand, arm, head, chin, mouth, tongue, foot, or even muscle movement. Switch categories include pressure (putting pressure on the device activates the switch), motion (movement over the switch activates it), sound, pneumatic (using air), or photosensitive (light reactive) switches (Lynch, 1997).

SCANNING

Scanning is another means of access to communication. Using scanning, a student selects a desired item from a series of items presented auditorally or visually in predetermined order (Blackstone, 1996). *Example: A student uses scanning to spell out a message letter by letter.* Items may be presented by a communication partner or by a communication device.

Partner-Assisted Scanning. Some students are unable to select items when they are presented by a communication device, but they are able to indicate a choice with support from the communication partner. For example, the partner may point to each item in the array as the student indicates yes or no to each item. Student fatigue is a concern in partner-assisted scanning.

Specific Scanning Technologies. Some devices are produced that are specifically designed to facilitate scanning. For example, some students use a clock-like scanning tool that is used with overlays of pictures, words, numerals, or letters organized in a circular pattern. The student depresses a switch when the clock pointer indicates the desired item.

Types of Scanning. Scanning access includes *step* and *inverse* scanning. Arrays of items may be presented in *linear*, *circular*, or *group* formats. Please refer to Table 4 for further description and examples of scanning.

Important considerations in using scanning technologies include

- The student's cognitive skills: Bunn (1998) suggests that students need prerequisite skills to communicate via scanning, including (a) ability to use a switch as a means to an end (which includes object permanence skills, understand of cause and effect, and mean/end understanding), (b) visual and/or auditory perception skills, (c) choice making ability.

- Time: Scanning can be a time-consuming communication means.

- Training: Scanning technology ranges from simple object scanning devices to complex computer software using group scanning. Students, families, and educators need adequate training to support the use of scanning for communication.

AAC DEVICES

There are several types of communication devices that students may use, ranging from simple communication boards to computers (Lynch, Moehn, & Walser, 1997). Most high technology AAC devices are computers, either dedicated devices designed specifically for communication or off-the-shelf computers adapted to meet communication needs (Blackstone, 1996). Most devices are used with direct or assisted direct selection. Some computerized AAC devices include specific scanning technology.

Communication Boards. These may include objects, pictures, or symbols designed to allow communication. Example: *A student in an early childhood program may use a communication board to indicate her choice of activity during center time. A student who uses a computerized device may use a communication board to indicate basic needs when her higher technology device is unavailable.* Boards may be simple (e.g., containing only a few pictures) or more complex (e.g., symbols or combinations of symbols and pictures). They may serve as a student's primary communication device or as a back-up to higher level technology (Lynch et al., 1997).

Simple Voice Output Devices. These devices present a set of messages (e.g., four pre-programmed responses) to the user. The user depresses a button or key to produce the desired message. *Example: A school psychologist helps a teacher design a system for a student to initiate communication in the classroom. With the student they identify three communication messages to program into a voice output device kept on the student's laptray: "I know the answer," "I need a break," and "This is an emergency."* Students can access these devices directly (e.g., by touching a button) or can activate a switch attached to the device.

Leveling/Layering Devices. These devices allow storage of several layers of messages. *Example: A teacher programs level one for use in reading activities, level two for use in math class, and level three for use during lunch.* A limitation to these devices is that, although the layers of messages can be pre-programmed in advance and changing message layers requires only pushing a button, the picture overlays must be changed manually.

Icon Sequencing Devices. Icon sequencing devices use pictures to represent words. The user depresses several keys in sequence to create a message. *Example: A student presses three icons in a row to produce the message "I want a drink of water."* To use icon sequencing devices a student must be able to remember what the icons and specific icon combinations represent.

Dynamic Display Devices. These devices present symbols or pictures on a computer screen, usually touch activated. Several layers of pictures can be stored. *Example: A student wants to explain to the school psychologist, with whom he is meeting, that he needs to go to his math classroom to take a makeup exam. He selects a picture on his communication device that represents class subjects and selects the math class icon. The device then presents a display of several school activities (e.g., reading, making a presentation, taking a test, etc.). He selects the icon representing test-taking.* Blackstone (1996) notes that an advantage of dynamic display devices is that layers are easily changed via direct selection and the user relies on recognition skills rather than recall of symbol meanings.

STANDARD COMPUTERS AS COMMUNICATION DEVICES

Some students are able to use standard computers as communication tools with software designed for communication. For example, dynamic display software programs are available for use with standard computers. According to Vanderheiden (1996), there are four strategies for making computers accessible to people with disabilities: (a) built-in or universal design, in which access features are built directly into the operating system or applications and include such features as sticky keys (which act as toggles) and slow keys (which increase the time a key must be depressed before it is read); (b) adaptive interfaces, which are standard products that can be installed to make the computer more accessible; (c) connections to other devices, such as Braille displays, to meet a user's needs; and (d) custom modifications to meet the needs of a specific user.

Lynch (1997) notes that students with disabilities prefer to use hands to access computers when possible. Features such as slow keys or sticky keys allow computer access through a standard keyboard. Software is available to facilitate production of written text via word prediction and keystroke expansion, in which longer words/messages can be represented by just a few keystrokes. Students without adequate hand control may use devices to facilitate head access to the keyboard, such as a head mouse or head mounted stick. Alternately, a student may use toe access or voice activation. Voice recognition technology requires that the user have good speech articulation. Students with severe speech/motor impairments may produce text via scanning.

Considerations that arise in the use of communication devices and computers include

- Training: High-technology devices and standard computers require significant training for the student, family, and school staff. As Todis and Walker (1993) observed, AT training often is conducted by a regional specialist available only on a limited basis, the training may be directed to only one staff member, and training often addresses technical aspects of the AT, but neglects focus on the purpose of the technology. "Staff training must emphasize that the goal is not just to teach the student to use the device but, rather, to show the student how to use the device to complete specified tasks and work toward IEP goals" (Todis & Walker, 1993; p. 11).
- Cost: Although the cost of computers continues to decline, some computers/AAC devices remain expensive, particularly in comparison with low-technology devices.

FACTORS LIMITING THE USE OF AT

Despite the numerous benefits for students AT can afford, there are certain factors that may limit its use and lead to technology abandonment. According to Scherer and Galvin (1996), approximately one-third of AT devices are no longer used after the first three months. The failure to consider user opinions and preferences in the selection of AT devices is the "overarching factor associated with technology abandonment" (Scherer & Galvin, 1996, p. 4). Some other reasons include (a) lack of improvement in student functioning from its use; (b) difficulties with service and repair; (c) difficulty with use of the device; (d) changes in the abilities or activities of the student; (e) lack of training or motivation to use the device; or (f) the way the device looks, weighs, or appears (Scherer & Galvin, 1996; Todis & Walker, 1993). Careful selection of AT devices, adequate training and resources to maintain the equipment, and ongoing evaluation of student progress can ensure that the devices are meeting students' needs.

SUMMARY OF BEST PRACTICES

Awareness

To meet the needs of all students in a school, the school psychologist must be aware of laws regarding the range of AT *devices and services* that might be required to provide the student a free, appropriate, public education. In addition, the school psychologist must be familiar with factors, including student, family, cultural, technology, and system factors, that affect AT selection and use.

Collaboration

The field of AT is growing by leaps and bounds, and most school psychologists are not AT experts. School psychologists must work with family members and other professionals, some of whom may be AT experts, to identify and meet the needs of students using or in need of AT.

Purpose of AT

In selecting or evaluating a student for AT, consider whether the AT facilitates attainment of important, socially and educationally valid goals for the student.

Individualization

Appropriate AT might differ significantly across students with similar limitations. When selecting AT, carefully evaluate the skills and needs of the student, the preferences of student, family, and teachers, and the context in which AT will be used. Make the technology fit the student, not vice versa.

Culture

Consider the cultures of the family and school in selecting AT. Cultural practices (e.g., in play and use of language) vary, and cultures differ in the degree to which they value technology and the independence technology is designed to afford. Also, appropriate computer software is not available in all languages.

Training

One of the primary reasons for abandonment of AT is inadequate training. Be sure appropriate AT training is available for the student, for teachers and other staff members, and for families.

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ABLEDATA is a federally funded project that provides up-to-date information about AT and rehabilitation equipment. Its website includes a database that contains information on more than 25,000 AT products. The database contains descriptions of the products, prices, and company information.

Galvin, J. D., & Scherer, M. J. (Eds.). (1996). *Evaluating, selecting, and using appropriate assistive technology.* Gaithersburg, MD: Aspen.

This is a comprehensive book about the use of AT with individuals with disabilities. It covers topics such as policy, legislation, funding, evaluation, selection, and maintenance. Chapters relate to the use of technology in education, employment, and recreation.

Rehabilitation Engineering and Assistive Technology Society of North America (RESNA). www.resna.org. 1700 N. Moore St. Suite 1540, Arlington, VA, 22209-1903.
RESNA is an interdisciplinary association for the advancement of rehabilitation and AT services. Its website contains useful resources about AT devices and services.

Wisconsin Assistive Technology Initiative (WATI). (1998). *Assessing students' needs for AT: A resource manual for school district teams*. Amherst, WI: Author.
This manual is an excellent resource for school personnel working with students using AT. It is organized around the tasks that children perform in schools (e.g., writing, reading, communicating) and includes information about assessment procedures and AT resources. It also contains useful forms that can assist educators in selecting appropriate AT. The manual can be ordered at WATI's website, www.wati.org.

AUTHOR NOTE

The authors would like to thank Joni Nygard, Communication Aids and Systems Clinic, UW-Madison; Penny Reed, Wisconsin AT Initiative; and Brent Odell, Wisconsin Department of Public Instruction, for their helpful comments on an earlier draft of this chapter.

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Best Practices in Peer-Mediated Interventions

Kathryn E. Hoff
Illinois State University
Sheri L. Robinson
University of Texas-Austin

OVERVIEW

School psychologists have unique training and expertise in assessment and intervention strategies that can be influential in promoting children's educational progress and development. Just as the majority of classroom instruction tends to be teacher-led, interventions for academic and behavior difficulties recommended by school psychologists are also likely to be teacher-directed. Investigations have demonstrated the efficacy of children as agents for peer behavior change, or peer-mediated interventions, as an ideal alternative to more traditional intervention approaches. This chapter will define and review the benefits of using peer-mediated interventions. Next, we will provide an overview of general considerations for school psychologists when implementing direct peer-mediated interventions. Finally, we will provide a brief review of a variety of peer-mediated interventions available to school psychologists.

Definition of Peer-Mediated Interventions

Peer-mediated interventions refer to academic, behavioral, or social strategies that employ peers, rather than adults, as direct or indirect behavior change agents. In this context, a peer is defined as a person who has relatively equal standing, age, or rank with others. Accordingly, a child's peer may include students of similar age, status, grade, knowledge, or developmental level. Four main types of peer-mediated interventions have been documented in the literature: (a) peers as models of selected behaviors; (b) peers as tutors for academic or developmental skills; (c) peers as managers of social or nonacademic behaviors of other children; and (d) peers as participants in group-oriented reinforcement contingencies with other children (Kohler & Strain, 1990). These interventions can be further broken down into direct and indirect interventions. Direct interventions are those procedures where peers directly influence the target behavior of a student, including peer prompting and reinforcement, peer-mediation, peer initiations, and peer tutoring. Indirect interventions include strategies in which peers influence behavior indirectly such as peer modeling, positive peer reporting and group contingencies (Mather & Rutherford, 1991).

Rationale for Peer-Mediated Interventions

Because of the training requirements and the general acceptance of adult-led instruction and interventions, teachers may be reluctant to incorporate peer-mediated interventions. In the following section, we provide a rationale for selecting peers as agents of peer behavior change, considering such issues as peer influence, new legislation, and a shift from a deficit model to a more ecological model.

PEER INFLUENCE

Current theories suggest that children engage in reciprocal relationships with their environment throughout the formation and organization of social relationships (Bandura, 1978). A child's social interactions typically consist of reciprocal and complementary interchanges with peers that support the actions and behaviors of other peer group members (Farmer & Farmer, 1996). Additional research indicates that peers mutually reinforce behaviors, values, and norms that are consistent with their own and exert a strong influence on one another's behaviors and attitudes within that group (e.g., conformity to group pressure) (Dishion, Andrews, & Crosby, 1995).

As children develop, peers play an increasingly central and influential role. For example, by age 11 almost 50% of a child's social activity involves peers, and by middle school children report spending more time talking and interacting with peers than any other activity. To date, much of the research interest is directed at negative behaviors such as consumption of alcohol, cigarette smoking, and delinquent activities. Research from the juvenile delinquency literature indicates that negative peer influences can exacerbate subsequent antisocial behaviors by providing a socially acceptable venue to engage in deviant behavior (Coie, 1997). While the negative effects of peer influence are evident, peers also play a powerful role in the development of positive behaviors. Because peers become increasingly important throughout child development, they are exceptional candidates as positive behavior change agents. Specifically, positive involvement with peers provides increased opportunities for children to engage in prosocial behaviors and may improve social acceptance and academic achievement.

The potential benefits of enlisting children as agents for peer behavior change has not gone unnoticed in our field, resulting in a steady increase of peer-mediated strategies in the literature over the last two decades. Positive results have been reported for various techniques, including class-wide peer tutoring (Greenwood, Maheady, & Carta, 1991), reciprocal peer tutoring (Fantuzzo & Ginsburg-Block, 1998), positive peer reporting (Ervin, Miller, & Friman, 1996), group contingencies (Skinner, Cashwell, & Dunn, 1996), peer-monitoring (Henington & Skinner, 1998), peer-mediation (Schrumpf, Crawford, & Bodine, 1997), and social skills training (Gresham, 1998).

LEGAL MANDATES

Although school psychologists have been committed to developing, implementing, and evaluating effective interventions for youth exhibiting problematic behavior, attention to this subject has intensified with mandates put forth by the 1997 Amendments to the Individuals with Disabilities Education Act (IDEA 97). These amendments require that school personnel develop and implement positive behavioral intervention strategies for children whose behavior impedes his or her learning or the learning of others, or if the child's inappropriate behavior is repetitive or anticipated to re-occur (34 C.F.R. §300.346(a)(2)(i); Appendix A, p. 12479). The new law creates an opening for more proactive strategies, and translates into a need for effective, time-efficient interventions. The most common intervention approach for students with problematic behavior is traditional teacher-led classroom management, which is less effective in environments where resources are limited. Simply put, it is unfeasible to expect a teacher to continuously monitor all students in the classroom. Sole reliance on teachers to implement individualized interventions for all students is also burdensome, leaving less time for other instructional activities. Peer-mediated interventions are a viable alternative and can be as effective as teacher-led programs. Additionally, the time and cost effectiveness of peer-mediated interventions may increase the acceptability of the intervention and the integrity of implementation for both the student and teacher.

ECOLOGICAL MODEL

Parallel to the recent changes in legislation is the evolution in practice from a within-child deficit model to a more ecological approach of assessment and intervention. While peers have been used in the past as models for appropriate behavior, much of the earlier literature on peer-mediated interventions has focused on using peers to facilitate the training or the acquisition of a specific skill. Consequently, interventions focused solely on changing a behavior *within* the target individual exhibiting the problem (a deficit model) and ignored the broader environmental context. For example, a discrete skill is selected (e.g., saying "please"), an intervention targeting the deficit is implemented (e.g., teach the child to say "please"), and the occurrence or non-occurrence of this behavior is recorded to document behavior change. Although specific skills continue to be targeted, assessment and intervention have increasingly focused on identifying the function of the behavior and environmental influences that maintain various behaviors. Recognizing that peers are part of the environment and a natural part of intervention programs is consistent with an ecological approach to assessment and intervention (Strain & Hoyson, 2000).

BASIC CONSIDERATIONS

School psychologists are likely to have a variety of roles when using peer-mediated interventions, including intervention facilitator, intervention monitor, consultant, and/ or parent-teacher liaison. Because of the school psychologist's involvement on multiple levels across students, teachers, and parents, it is important to be familiar with the potential advantages and disadvantages of using peer-mediated approaches for all those involved (see Table 1).

Advantages of Using Peers

ACCESSIBILITY OF PEERS

From a practical standpoint, classroom peers are readily available and children have more continuous, frequent, and convenient access to their peers than adults. Children also spend time together across a larger variety of settings, many of which preclude adult interaction (e.g., transition times, restroom, lunch, or recess). As such, using peers for interventions capitalizes on the "social and instructional resources of the classroom, school or district to address fundamental needs of children" (Garcia-Vazquez & Ehly, 1995 p. 404).

Table 1. Advantages and disadvantages of peer-mediated interventions

Advantages

- Accessibility of peers
- Adaptability
- Enhanced generalization
- Teacher flexibility
- Increased active engagement and performance feedback
- Academic, cognitive, social, and interpersonal benefits

Disadvantages

- Ethical concerns
- Initial time requirement
- Cost

ADAPTABILITY

Peer-mediated interventions can be successfully employed with a wide range of students, including students with disabilities (e.g., autism, learning disabilities, behavioral disorders, severe disabilities), social difficulties (e.g., peer rejection, social isolation), academic concerns, or non-disabled students. Historically, peer interventions were used to facilitate integration and inclusion of students with disabilities into the classroom. Interactions with more advanced peers provided model behavior and encouragement for appropriate behaviors, and promoted the development of social relationships, communicative, and academic skills of students with disabilities. More recently, however, peer-mediated interventions have been extended to non-disabled students, and research has demonstrated gains in cognitive, academic, behavioral, and social performance in both participants (the target and confederate peer).

ENHANCED GENERALIZATION

Another major advantage of using peers as intervention agents is the facilitation of generalization and maintenance of target behaviors (Greenwood & Hops, 1981). Peer-peer interactions are qualitatively different from adult-child interactions, and provide a natural context for behavior change. Peer-mediated interventions can facilitate generalization by eliciting responding with numerous peers and settings, providing multiple exemplars. Because peers are available in multiple settings, they may serve as cues or common stimuli in the presence of which the target behavior may be more likely to occur in untrained settings. When implementing an intervention, peers naturally vary their response, providing opportunities for students to learn skills under more loosely controlled contexts. Finally, peer interactions during an intervention may serve as a natural reinforcer, potentially enhancing maintenance of intervention effects beyond that of a contrived reinforcement system (Strain, Kohler, & Goldstein, 1996).

TEACHER FLEXIBILITY

While initial planning requires additional teacher time, peer-mediated interventions permit teachers to spend less time engaged in direct instruction and more time monitoring and providing feedback to individual students. Less time in direct instruction allows for increased individualized instruction or intervention without high demand of teacher time. The use of peer-mediated procedures, either direct (e.g., peer-monitoring of inappropriate behavior) or indirect (e.g., increased engaged time during peer tutoring) also may result in teachers spending less time addressing behavior problems.

INCREASED ACTIVE ENGAGEMENT AND PERFORMANCE FEEDBACK

Typical teacher-led instruction may be accompanied by as little as 30% active engaged learning time by students (Mathes & Fuchs, 1994). Using peers as intervention facilitators can lead to the subsequent increase in the percentage of active learning time in the classroom. Peer-mediated interventions (e.g., peer-tutoring) facilitate a higher level of attention to task because of increased opportunities to respond, give and receive feedback, be actively engaged, and ask questions. Additionally, a high level of performance feedback can motivate students, thereby enhancing overall performance.

ACADEMIC, COGNITIVE, AFFECTIVE, AND INTERPERSONAL BENEFITS

Peer-mediated interventions have resulted in academic, cognitive, affective, and social gains across heterogeneous groups of children and settings (e.g., Stern, Fowler, & Kohler, 1988; Tabacek, McLaughlin, & Howard, 1994; Mathes & Fuchs, 1994). For example, Ervin et al. (1996) reported increased positive social interactions and decreased negative exchanges among peers and target children participating in a peer-mediated intervention. Other researchers have reported lower levels of inappropriate behavior, and enhanced cooperation and positive attitudes for participants (Eiserman, 1988; Johnson & Johnson, 1994; Maheady, 1998). The peer-tutoring literature has demonstrated that both peer tutors and tutees demonstrate academic gains (Greenwood, Carta, & Hall, 1988). Finally, participating in peer-mediated interventions may result in affective benefits such as increased self-confidence (Lane, Pollack, & Sher, 1972) and feelings of altruism (Topping & Ehly, 1998).

Disadvantages of Using Peers

ETHICAL CONCERNS

The various methods of peer-mediated interventions have led to three general areas of ethical concern: accountability, competence, and informed consent (Garcia-Vasquez & Ehly, 1995). School psychologists should be prepared to respond to parental concerns regarding the learning benefits of peer-mediated learning programs, such as peer-tutoring. Parents of children receiving and delivering instruction may express concern regarding the value and benefits of such programs. Specifically, questions may arise regarding the ability of peers to adequately teach the material, and, conversely, parents may express concern over the use of their child's instructional time for providing instruction to peers. While the benefits of such programs have been documented for both the tutor and the tutee (Greenwood, Carta, & Hall, 1988), it is necessary to include procedures that allow the progress of all students involved to be monitored and documented. Collecting progress data will allow teachers to make any necessary adjustments in the intervention and determine the extent to which participants are benefiting from the program.

Another potential ethical concern is identifying the "less skilled" child, as may be the case in peer-tutoring dyads or social/behavioral interventions. Procedures must be in place to ensure students are not always identified as the tutee or target child by providing opportunities for students to experience both roles.

All of these concerns are valid and may be prevented by (a) providing parents with literature describing the program and its benefits, (b) allowing children and parents to choose participation without coercion, (c) providing adequate training to tutors and tutees, (d) carefully selecting peer tutors and evaluating mastery of necessary skills, and (e) providing careful and consistent monitoring.

INITIAL TIME REQUIREMENT

Although peer-mediated interventions can be less time-consuming in the long run, often it does require time up front to select and train peers (Garcia-Vazquez & Ehly, 1995). For example, curriculum adaptations are often necessary for peer-assisted learning strategies such as peer tutoring or cooperative learning. While most objectives and materials can be adapted for peer-mediated approaches, making such adaptations has been noted as one of the most time-consuming components of the program.

COST

Related to teacher time is the expense of the program, including teacher planning and training time, peer training, program materials, and consultation. While start-up costs must be considered, once peer-mediated programs are in place, they have been found to be more cost-effective than other methods (e.g., teacher aides).

BEST PRACTICES

There are a number of practical considerations for school psychologists to take into account when using peer-mediated interventions. Below are some general guidelines for developing, implementing, and evaluating a peer-mediated intervention.

Prior to the Intervention

To optimize intervention effectiveness, a thorough assessment of the environment should be conducted in order to tailor the intervention to the classroom environment, social context, and the needs of the student (Gresham, 1998). Because a detailed description on the comprehensive assessment of the environment is beyond the scope of this chapter, we refer readers to other chapters in this volume for discussions and readings on these important topics (e.g., Knoster & McCurdy, this volume).

Developing the Intervention

SELECTING A TARGET BEHAVIOR/RESPONSE

Following a thorough assessment of the environment, appropriate student goals and objectives must be identified. The target skill and subsequent intervention should be directly linked to the assessment information and matched to the student's ability level. If too many new or unknown skills are included, then students may not achieve a sufficient ratio of success for optimal learning. Consequently, it may be helpful to identify conditions where the student already exhibits some level of the behavior. Additionally, the intervention should be matched to the environmental context. For example, a group contingency program designed to increase cooperative interactions may be more effective in a classroom that allows talking and free movement, increasing the likelihood of cooperative play interactions (Strain, Kerr, & Ragland, 1981). Finally, clear and appropriate rules and outcomes should be established. The target skill and response should be specific, and students should be able to easily discern if an answer or response is correct or incorrect, especially if the peer is responsible for delivering a consequence contingent upon exhibiting a behavior (e.g., asking a tutor to decide if a tutee's response to a spelling word or math fact is correct or incorrect and subsequently providing appropriate feedback) (Miller & Kohler, 1993).

SELECTING A PEER-MEDIATED INTERVENTION

Similar to selecting a target behavior and response, the selection of an intervention should be linked directly to the assessment information, individualized, and based on the function of the problem behavior for the student. School psychologists can take advantage of a large body of literature describing effective peer-mediated interventions. Some strategies include using peers for peer-tutoring (e.g., class-wide and reciprocal peer tutoring) (Delquadri, Greenwood, Whorton, Carta, & Hall, 1986; Fantuzzo & Ginsburg-Block, 1998), cooperative learning groups, paired learning activities, counseling and education, peer mediation (Schrumph et al., 1997), modeling appropriate behavior, group contingencies (Skinner et al., 1996), peer-monitoring and assessment (Dougherty, Fowler, & Paine, 1985; Henington & Skinner, 1998).

SELECTING INTERVENTION TIMES

After identifying an intervention, it is necessary to define appropriate times during the week when the intervention will be implemented. Given that teachers' schedules are typically quite busy, the school psychologist can work collaboratively with the teacher to find times during the day he or she may be able to restructure an activity for a peer-mediated intervention, rather than creating an extra activity for the teacher to fit into the day (Maheady, Harper, & Sacca, 1988).

SELECTING PEER FACILITATORS

Peer facilitators are needed for peer assisted learning strategies. The following characteristics have been identified for ideal peer trainers: regular school attendance, exhibits desired skill or behavior, compliant with adult direction, willing to participate in the program, and responsive to adult reinforcement. While the ideal peer model has all of the above characteristics, it is not always possible or even necessary to find facilitators with these characteristics. Tutors or models can be trained to demonstrate mastery of the specific target skill prior to becoming a facilitator.

TRAINING PEERS

Peer-mediated interventions should be used only after students have been trained sufficiently in the intervention procedures. Although training of peers can increase the initial time commitment, thorough training is associated with better outcomes. Because this component is so critical, we suggest a structured training session prior to the implementation of the intervention, which should include explicit training steps and procedures for students to follow. To help structure student training and to enab[illegible]he trainer to quickly provide specific academic, behavioral, or social responses, we recommend using a pre-written training manual (if one is available). Examples of such manuals are provided in reference section of this chapter. If a manual is not available, then written guidelines can be posted in the classroom or attached to students' desks.

Successful training involves deciding who will carry out the training, how and where training will occur, and how often training will be conducted. Generally, the training format should consist of (a) introduction of the skill and/or presentation of the material, (b) modeling of the intervention procedure, (c) role-play of skills with praise and corrective feedback , and (d) monitoring and corrective feedback of the first few initial trials (e.g., Greenwood et al., 1988). Practice of the intervention procedures should continue until mastery is attained (independent of adult instruction), or until a pre-determined criterion is met. There is no generally accepted period of time that is considered optimal. However, research has demonstrated that students can typically learn intervention procedures in two to four sessions. Considerations such as the complexity of the material to be taught and the age and skill of the students will need to be addressed (Harper, Maheady, & Mallette, 1994).

Peers inadvertently may reinforce inappropriate behavior, punish appropriate behavior, or fail to provide the appropriate contingencies, thereby extinguishing the target behavior. Therefore, students should be taught how to administer appropriate consequences and/or error correction procedures based on the occurrence or nonoccurrence of the behavior, or quality of the response (Kohler & Strain, 1990). For example, students can be taught to provide some type of a reward contingent upon a correct response, such as a verbal statement ("Yes, that is correct"; "Good work!") or a tally mark that could be exchanged for a backup reward (Miller & Kohler, 1993).

In addition to the general intervention procedures, training also may incorporate trouble-shooting techniques by teaching students how to respond in situations where a peer provides an incorrect response or fails to respond. For example, in a peer-mediated social intervention for students with autism, peer helpers were taught to be persistent when initiating social contact. As training of the peer helpers progressed, the trainers (acting as a child with autism) made it gradually more difficult for the peers to evoke a correct response by ignoring the child or waiting a progressively longer period of time before responding to the peer initiations (Strain et al., 1996). In a similar example, Kohler and Fowler (1985) trained participants how to respond to target children if they refused play invitations and modeled alternative responses ("Ok, I will ask again later"). For additional strategies and examples, the reader is referred to Kohler, Shearer, and Strain's (1990) *Peer-Mediated Intervention Manual.*

Implementation of the Intervention

PROGRAMMING ENVIRONMENTAL SUPPORTS

Classrooms are heterogeneous, which adds to the organizational complexity of any intervention. In many cases, structuring the environment will be necessary to ensure the target behaviors are supported within the natural context and to enhance maintenance and generalization of skills. For example, merely placing children together in play situations may not spontaneously elicit the desired cooperative behaviors or positive interactions among peers. The environment needs to be designed to elicit these behaviors. One necessary environmental arrangement may include increasing and/or structuring the opportunities for the child to engage in the appropriate behavior. Both social and academic interventions require an environment that promotes increased and varied opportunities for the student to engage in the target behavior (Strain & Hoyson, 2000). For example, within peer-tutoring interactions students should be engaged in a high or rapid rate of responding and practice, and students should receive a sufficient number of opportunities to practice each item for mastery (Fuchs, Fuchs, & Burish, 2000). Additional environmental arrangements may include providing feedback and reinforcement, altering structural arrangements or manipulating the composition of groups, and/or providing additional prompting and rewards to further increase desirable behavior. When extending the intervention to non-trained settings, or in settings when fewer adults are present, such as recess or lunch, a more intensive reward program may need to be implemented at the outset.

Monitoring and Evaluating the Intervention

When peer-mediated interventions are employed, the teacher's primary role shifts from directly teaching skills to managing and supervising the intervention. Consequently, teachers must closely monitor the program to determine if additional accommodations or changes are necessary. Practical examples of such monitoring include walking around the room and listening to ensure students understand the task, prompting the necessary skills or responses, ensuring error correction procedures are being used adequately, and making certain students are providing appropriate contingencies. Additionally, teachers should provide specific feedback to students regarding behaviors they are performing well and any changes students should make (Miller & Kohler, 1993).

As with any intervention, data should be collected in order to monitor student progress and the effects of intervention on the target behavior. Monitoring goals should be observable and measurable, and assessed with outcome measures that directly relate to the skills that are taught (see Steege this volume, for further discussion on evaluating interventions). Although it is often not feasible for the school psychologist to directly collect progress-monitoring data, consultation can be provided to help the teacher identify appropriate data collection and recording methods and to help with data analysis (e.g., single-subject design). While the individual objective of interventions will vary, progress monitoring for peer-mediated interventions may include (a) academic performance indicators, such as quiz scores, worksheet accuracy (calculating the percentage of correct responses) or curriculum based measurement; (b) social gains indicators such as the quality of interactions, frequency of social initiations, frequency or duration of interactions, proximity of peers, or sociometric data; or (c) affective gain indicators such as attitudes toward peers, school, or self.

Adjustment of Intervention if Necessary

In the course of progress monitoring, it may be determined that some students are making insufficient progress. A thorough assessment is necessary to determine which intervention components need to be adjusted. For example, if the student is not progressing at an appropriate academic rate, a closer look at the academic environment may indicate certain adjustments should be made, including longer tutoring sessions, more frequent sessions, more intensive training on a particular skill (carrying math facts), or further training in peer-tutoring procedures. Factors outside of the immediate academic task may reveal further problems. For example, routine problems during peer tutoring that often require additional intervention include loud noise levels, cheating during tutoring procedures, arguing or student disruptiveness (Greenwood et al., 1991). If it is determined that the intervention is not successful, then the school psychologist should return to the assessment of the environment or target skill to determine if the intervention is appropriate and what adaptations can be made.

Maintenance of the Intervention

To encourage sustained use over time, peer-mediated procedures must be relatively easy to use, and potentially adaptable for a group or class-wide setting. School psychologists can help maintain the continued use of peer-mediated interventions by providing manuals with detailed instructions and steps to follow, preparing teachers for potential pitfalls and identifying possible solutions, remaining available for trouble-shooting sessions, and by implementing treatment integrity checks (e.g., Greenwood et al., 1988; Schrumph et al., 1997).

PEER-MEDIATED INTERVENTIONS

Peer-Tutoring. There is a long-standing history of peer involvement in the educational curriculum, and numerous examples attest to the effectiveness of peer-mediated academic intervention programs (e.g., cooperative learning, class-wide peer tutoring, reciprocal peer tutoring, peer-assisted learning, and academic coaching). Peer tutoring is one of the most commonly used academic interventions, and is the subject of extensive research (see reviews by Delquadri et al., 1986; Greenwood et al., 1991; Mathes & Fuchs, 1994). A number of peer-tutoring methods have been suggested, varying on a number of factors, including peer-pairing procedures (e.g., same-age versus cross-age, high-status with low status peers, pairing by disability, pairing by classroom type), intervention focus (e.g., individual versus class-wide, cross-age tutoring, reciprocal tutoring, cooperative learning groups), content area (e.g., spelling, reading, vocabulary, and mathematics), and procedural factors (e.g., contingencies) (Greenwood et al., 1991).

Common elements of peer-tutoring interventions include student training, use of a structured set of procedures, high rates of responding and practice, performance feedback, and point earning contingencies (Greenwood et al., 1991). For optimal academic learning, the instructional environment should be arranged so students are afforded repeated opportunities to practice the material. Thus, within peer-tutoring interactions, students should be engaged in a high rate of responding and practice. For example, if the skill to be taught is correct recitation of the 2s and 3s division facts, flashcards allow multiple repetitions within a short period of time. Additionally, students should engage in a sufficient number of opportunities to practice each item for mastery. Consequently, only a small set of skills should be used in each tutoring session. The focus should be on mastery of a smaller set of material, rather than exposure and practice of a broader range of material. Finally, turn taking as a tutor and tutee ensures students practice in both roles (Miller & Kohler, 1993; Fuchs et al., 2000).

Performance feedback is also a necessary component of peer-tutoring interventions. Specifically, tutors should provide immediate, appropriate, and corrective feedback to the tutees. As a consequence, tutors should be taught specific procedures and prompts for situations where the tutee elicits an incorrect response, or fails to respond. Error correction procedures may consist of the tutor stopping the tutee and prompting the tutee for the correct response, or providing the correct answer and engaging the tutee in repeated trials of practicing the correct response ("The answer is 10. Now you try this problem again. What is 5 plus 5?"). In other situations, the tutor may need to prompt the tutee for a response. For example, providing a verbal cue, "Try this math problem." Finally, tutors should provide some type of a reward contingent upon a correct response, such as verbal praise or a secondary reinforcer that can be exchanged at a later time (Miller & Kohler, 1993).

Peer-Mediation. Mediation is one component of conflict resolution that requires the parties in conflict to meet with a neutral third party to resolve the problem (Schrumpf et al., 1997). During the mediation process, the peer-mediator is responsible for creating and maintaining the problem-solving communication between those in dispute. Each party listens to the other's point of view, identifies areas contributing to the conflict, identifies potential solutions, and selects an agreed upon solution.

Perhaps in response to the increased focus on aggression and school violence, conflict resolution and peer-mediation programs are becoming increasingly popular in public schools. In a review of the literature on peer-mediation, there was evidence that following peer-mediation training, students retained the information learned and were able to accurately apply the procedures, reported fewer conflicts, and generalized the skills beyond the training setting (Johnson & Johnson, 1994). However, most of the research is limited to correlational, anecdotal, and self-report data and therefore must be interpreted cautiously.

Positive Peer Reporting. Positive peer reporting (PPR) is a simple peer-mediated technique that involves the use of peer attention and prosocial statements to improve the quality of peer interactions. Specifically, peers publicly report the positive behaviors exhibited by a target child to the teacher for a brief, specified period of time (e.g., last 5 minutes of homeroom). A faux raffle or drawing can be conducted to select a name in order to preserve the identity of target children. During PPR, peers report any prosocial behaviors exhibited by the target child over the course of the day for a specified number of days (e.g., typically 1 week). Peers are rewarded for making comments deemed specific and genuine by the teacher. The underlying rationale for this intervention centers around the powerful influence peers can have on behavior and the premise that public acknowledgement of a behavior from peers may be more reinforcing than when delivered by adults (Ervin et al., 1996).

Repeated demonstrations of improvements in the quality of peer interactions during treatment phases have provided substantial support for PPR as an effective intervention for children with performance deficits in social skills and/or children who are socially rejected or ignored. Table 2 provides the general steps of the procedure.

Social Skills Interventions. Three types of peer-mediated interventions for improving social skills have been identified: (a) proximity procedures, (b) prompt and reinforcement procedures, and (c) peer initiation procedures.

Proximity interventions are characterized by placing socially skilled children with target children to initiate and encourage play, but without any training. Studies using proximity procedures typically have included peer-pairings of high and low accepted children, or higher functioning children and lower functioning children. Peer prompting and reinforcement interventions move beyond proximity by training peers to prompt and then reinforce a desired behavior (e.g., social initiation) of target children. In general, a teacher initially teaches a peer confederate to deliver a peer prompt (e.g., "look at me"), or elicit a social behavior (e.g., "hi"), and then provides reinforcement (e.g., praise). For the third procedure, peer-initiation, peers are trained to initiate social interactions with a target child (e.g., ask to play), thereby providing increased opportunities to respond.

While many of the peer-mediated interventions in the social skills literature have resulted in behavior change, intervention success rarely has been documented over extended periods of time, or outside of the immediate intervention locale to more natural contexts. Gresham (1998) has suggested that in order to improve upon these strategies, school psychologists should (a) engage in careful assessment using socially valid techniques (e.g., friendships) and observation, (b) take advantage of naturally occurring occasions in order to promote generalization, (c) match the training to specific deficits, and (d) develop and teach skills that will work more reliably than competing problem behaviors.

Group Contingencies. Group contingencies maximize on the dynamics of peer influence among children by taking advantage of social contingencies controlled by the peer group (see Skinner, this volume, for additional information). Group contingencies have been found to be at least as effective as individual contingencies, but require less teacher time. There are three types of group contingencies, each with varying degrees of embedded peer influence: independent, interdependent, and dependent. Independent group contingencies allow for each child to receive the same consequence based on individual behavior. Only those children who meet the criteria have access to reinforcement. Peer influence plays the smallest role in independent group contingencies, but is still in effect (e.g., observing a peer receiving reinforcement, competition). Interdependent group contingencies require an entire group to reach a specified level of performance in order to gain access to reinforcement (e.g., an entire class remains quiet while transitioning in order to receive a pizza party). The final type of group contingency is the dependent contingency. With a dependent group contingency, the consequence for a group is determined by the performance of an individual (e.g., "If Joe finishes his assignment, the whole class gets 5 extra recess min-

Table 2. Positive peer reporting

- Identify target student (peers are not aware that there is a target student because all class members can participate)
- Select a location and time period: 5–10 minutes is needed
- Teach and practice specific examples and non-examples of positive behaviors appropriate for reporting (example: Sam passed the ball to me during basketball practice; non-example: I like Sam's new haircut)
- Have class help identify rewards for participation (group contingencies work well)
- Have a drawing to select target students
- Post the name of the target student and class progress toward reward

utes."). It is important to make sure that peer influence does not become pressure or coercion. This can best be prevented by only using reinforcement contingencies (not cost), and setting appropriate, attainable goals.

Peer Monitoring. Peer monitoring involves teaching children to observe and objectively record a specific behavior (e.g., assignment completion). Similar to self-management, peer monitoring procedures (peer observation and recording) also can be extended to include peer evaluation (the comparison of a peer's behavior with a determined standard such as class rules) and reinforcement of peer behavior (Henington & Skinner, 1998). Peer monitoring can be a time-efficient method to collect data on social, academic, appropriate, and inappropriate behaviors. It also may be incorporated into other peer-mediated interventions such as peer tutoring and social skills training. For example, during peer tutoring, peers observe the occurrence or non-occurrence of a target behavior (e.g., spelling a word), record and evaluate accuracy (correct or incorrect spelling), and provide reinforcement (e.g., praise, star, points).

Peer Modeling. Peer modeling involves a target child viewing an appropriate behavior of at least one peer. An advantage of peer modeling is that the similarity of a peer-peer interaction can enhance motivation and self-efficacy for learning and promote academic achievement beyond an adult modeling interaction. Despite the potential effectiveness, peer modeling cannot always stand alone. A student skill may require more than a modeled demonstration of a skill, such as practicing the skill and receiving corrective feedback. Additionally, it may help to highlight the distinctive features of the modeling session to which the students should attend (Schunk, 1998).

Multiple Component Intervention. Peer-mediated techniques can be embedded within a comprehensive intervention package. One intervention example is Learning Experiences: An Alternative Program (LEAP) (see Strain et al., 1996, for a program description). This comprehensive early intervention program for typical preschoolers and preschoolers with autism includes intensive peer-mediation procedures to increase or enhance communication and social interaction, as well as specific training sessions in classroom instruction and family involvement. In the LEAP program example, peers were taught specific peer-initiation procedures such as establishing eye-contact, describing play, initiating joint play, establishing joint attention, repeating, requesting further clarification or expanding on the verbalizations made by the child with autism, and prompting requests. In a recent publication describing the preliminary results of the 18-year study in which the LEAP program was used, data indicate that the level of positive interactions increased from 3 to 23%, comparable to same aged peers (Strain & Hoyson, 2000).

Other Interventions. Other peer-mediated interventions that are beyond the scope of this chapter but may be of interest to readers include peer counseling, peer-mentoring peer-support groups, and peer-education. These additional interventions are often used to prevent or reduce harmful behaviors such as drugs and alcohol use, smoking, or to increase desired behaviors such as abstinence from sexual activity. Readers are referred to Foot, Morgan, and Shute (1990) and Topping and Ehly (1998) for additional information on these topics.

SUMMARY

Owing to limited resources in our schools, interventions are needed that maximize available classroom resources while maintaining or improving learning outcomes. Peers are highly influential in child development and are a valuable resource in the schools. Although a majority of the interventions for academic and behavior difficulties currently recommended by school psychologists are likely to be teacher-directed, peer-mediated interventions are an effective and efficient technique that can be employed. Moreover, results of peer-mediated intervention research demonstrate that peers can apply intervention procedures, provide opportunities for peers to learn from multiple examples, and are at least as effective than adults as intervention agents.

The school psychologist as a problem solver, intervention facilitator, consultant, or parent/teacher liaison can serve a primary role in developing, implementing, and evaluating peer-mediated interventions. Advantages to using peer-mediated interventions, including benefits to both the target and non-target peer, enhanced generalization, and greater flexibility for the classroom teacher make peer-mediated interventions an attractive option for school psychologists to add to their list of interventions. School psychologists who wish to use peer-mediated interventions have a variety of strategies to choose from.

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This text provides a historical perspective and review of peer mediated interventions. Issues of generalization, advantages and disadvantages of peer-mediated interventions, and practical considerations are thoroughly discussed.

Topping, K. & Ehly, S. (Eds.). (1998). *Peer-assisted learning*. Hillsdale, NJ: Erlbaum.

This edited book is an up-to-date and comprehensive book addressing peer-mediated interventions. The book is composed of 17 chapters broken down into five general categories: benefits of peer-assisted learning, peer tutoring, peer facilitation, peer feedback, and extensions of peer-assisted learning. The chapters provide overviews of the various techniques in addition to research on the subject and useful references for additional information.

99 Best Practices in School-Based Vocational Assessment

Edward M. Levinson
Indiana University of Pennsylvania

OVERVIEW

Unfortunately, students are leaving schools without the skills necessary to acquire and maintain satisfying jobs. A report published by the U.S. Department of Labor (1991) concluded that "...more than half our young people leave schools without the knowledge foundation required to find and hold a good job " (p. xv). The U.S. General Accounting Office (1993) reported that one-third of young workers ages 16–24 do not have the skills they need to perform entry-level, semiskilled jobs. A series of nationwide studies commissioned by the National Career Development Association and carried out by the Gallup Organization (Brown & Minor, 1989; Hoyt & Lester, 1995) revealed that only one-third of adults are in their current jobs as a result of conscious planning. The remaining two-thirds entered their jobs because of chance factors, the influence of others, or because they took the only job available. Only about half of these workers reported that they were satisfied with their jobs.

The school population with whom school psychologists work most frequently, individuals with disabilities, may be at even greater risk than the general population when it comes to preparation for work. Studies have consistently demonstrated that compared to their non-disabled peers, individuals with mild disabilities experience a higher rate of unemployment and underemployment, lower pay, and more dissatisfaction with employment (Dunn, 1996).

One factor that has historically contributed to the lack of vocational preparedness among individuals with disabilities is the elevated drop-out rate that characterizes this population. Studies that have compared special education drop-out rates with control group drop-out rates or normative data have consistently demonstrated that students with disabilities leave school more often than students without disabilities (Ysseldyke, Algozzine, & Thurlow, 1992). Students with learning disabilities and emotional disabilities appear to be at particularly high risk of dropping out of school. Drop-out rates for these students have been reported to exceed 40 and 50%, respectively (Gajar, Goodman, & McAfee, 1993).

But why do students drop out of school? One explanation is that for the majority of students who do *not* plan to go on to college, schools are particularly ineffective in addressing their educational and vocational needs. A 1993 Gallup Poll (Hoyt & Lester, 1995) indicated that 60% of American adults said high schools devote enough attention to preparing students for college, but *not* enough attention to helping non-college–bound students get jobs. Most schools direct most of their resources toward preparing students for college. Yet only about 15% of incoming ninth graders go on to graduate from high school and then obtain a 4-year college degree within 6 years of their high school graduation (Morra, 1993). Hence, schools focus their curriculum more on the educational needs of the college-bound minority than on the educational needs of the work-bound majority. Among students with disabilities, the need to address vocational skills rather than the academic skills necessary for entrance into to college is even more pressing. The 21st Annual Report to Congress on the Implementation of the IDEA (U.S. Department of Education, 1999) reported that only 24.5% of students with disabilities ages 17 years and older graduated from high school with a diploma (a prerequisite for college entrance). This report also indicated that students with disabilities were less likely to drop out of school and more likely to be competitively employed after high school if they received adequate vocational education training in high school. The report concluded that at the systems level, major changes are needed in schools, adult service agencies, and in the community if the vocational needs of students with disabilities are to be met. There is little doubt that given the high unemployment and underemployment rates that exist among individuals with disabilities, and the elevated drop-out rate that exists among this population, efforts in the area of special education have not assisted these individuals in making a successful adjustment to work.

To address the problems just outlined, considerable legislation has been passed in the last 10–15 years designed to improve the vocational and career assistance provided to individuals with disabilities. The Vocational Rehabilitation Act, the Education of the Handicapped Act, the Vocational Education Amendments Act, and the Career Education Incentive Act have combined to provide federal funding assistance to assist individuals with disabilities to prepare for work.

More recently, the Carl D. Perkins Vocational Education Act and the Individuals with Disabilities Education Act have contributed to the development of school-based vocational and career assessment services. The Perkins Act requires that information about vocational education opportunities be provided to parents and students no later than the beginning of the ninth grade or at least 1 year before the student enters the grade in which vocational education is offered. The Act also requires that information about eligibility requirements for enrolling in vocational education programs be provided to parents and students, and that once enrolled in vocational education, students receive an assessment of interests, abilities, and special needs and other special services designed to facilitate transition from school to post-school employment or training.

The Individuals With Disabilities Education Act (IDEA) was originally passed in 1990, and amendments to it were passed in 1997. IDEA incorporates requirements for the establishment of services designed to assist students in making a successful transition from school to work and community living. Under this law, plans for a student's transition from school to work and community living must be initiated by age 14.

A necessary first step in transition planning is assessment (Levinson, 1998). Assessment is designed to identify what skills a student needs in order to make a successful transition to work and community living. Given that all transition planning should be based upon assessment, a through and valid vocational assessment of student needs is a necessary, prerequisite, and perhaps most important first step in the transition planning process. Readers who are interested in additional information on transition services are referred to Levinson (1998) and Levinson and Murphy (1999) and/or chapters on transition elsewhere in this volume.

To briefly summarize, students in general, and students with disabilities in particular, are not being adequately prepared for work by our public schools. Though the overwhelming percentage of students, particularly those with disabilities, do not pursue post-secondary education and leave high school in search of employment, our schools typically emphasize an academic program designed to prepare students for post-secondary education. As a consequence, many students, particularly those with disabilities, find that the education they are receiving does not meet their needs and eventually drop out of school.

For the purposes of this chapter, the terms "career assessment," "vocational assessment," "vocational evaluation," and "work evaluation" will be considered synonymous, although distinctions have been made among them in the literature. While the purpose of all of these processes is to generate information that can be used to assist individuals in making decisions regarding career choice, differences have largely to do with the professional group involved in the process, the setting in which the process occurs, or the instrumentation or methodology utilized to complete the process.

Historically, school psychologists have reported spending only a small percentage of their time in vocational activities despite attaching great importance to them (Shepard & Hohenshil, 1983). Studies have indicated that approximately one-third of school psychologists have had some involvement in vocational assessment (Levinson, 1988), though the percentage of time spent by school psychologists in this aspect of assessment has been estimated to be less than 1% (Carey, 1995). Staab (1996) surveyed a randomly selected sample of 602 school psychologists working at the secondary level to determine (a) the functions they performed in the area of transition planning, (b) the importance they attached to transition planning, and (c) the barriers they perceived to exist that prevented them from participating in transition-planning activities. Results indicated that school psychologists were interested in transition-planning activities, perceived these activities to be important, but generally felt unprepared to perform the activities listed. However, the two transition activities that were described as activities that school psychologists "definitely should" perform were associated with vocational assessment: "explain test results to students so that they understand their strengths/needs, and modifications/adaptations needed for successful transition planning and programming" and "completing triennial evaluations to help meet transition planning needs."

Despite limited involvement by school psychologists in vocational assessment activities, the National Association of School Psychologists (NASP) has provided some support for school psychologist involvement in vocational activities, and incorporates both vocational assessment and vocational intervention in its *Professional Conduct Manual*. In its description of Standards for the Provision of School Psychological Services, NASP (1997) states, "Psychological and psychoeducational assessments include evaluation, as appropriate, of the areas of...vocational development, aptitude, and interests" (p.44). In reference to consultation, the standards state, "School psychologists provide skill enhancement activities (such as...vocational development...) to school personnel, parents, and others in the community, regarding issues of human learning, development, and behavior" (p. 44). In reference to direct service, the standards state, "School psychologists design direct service programs to enhance...vocational development" (p. 45).

Hence, if school psychologists are going to practice their profession in a manner consistent with their professional standards, then they must be involved in vocational assessment and programming in the schools. In fact, given their particular expertise as compared to other professionals in the schools, the school psychologist's involvement in the vocational assessment process may be critical to the success of such programs. As I have stated elsewhere (Levinson, 1993, 1995, 1998; Levinson & Murphy, 1999), the school psychologist's psychometric expertise and knowledge of measurement theory can safeguard against the inappropriate selection and use of assessment devices, and the inappropriate interpretation and use of assessment data (historically a problem in school-based vocational assessment programs). Their skills in assessment can be used to generate data (i.e., intelligence, achievement, personality, social skills, etc.) which is critical to vocational planning, and their knowledge of learning and behavior theory and of adolescent psychology can be used in the effective development and implementation of vocational services.

For school psychologists to become significantly involved in vocational assessment activities, however, several important changes need to occur. First, their knowledge and skills in this area must be upgraded. Despite NASP standards that incorporate vocational/career assessment, vocational/career counseling, vocational/career consultation, and vocational/career program development, there is little evidence that accreditation of training programs is at all contingent on *any* of these skills being taught to pre-service school psychologists. Hence, few if any school psychologists who graduate from NASP-approved school psychology programs have been adequately prepared to provide the vocational and transition related activities that NASP itself includes in its standards.

Minimally, school psychologists need to become more informed about career development theory and its application in assessment, counseling, consultation, and program development. School psychologists need to understand transition from a K–12 career development perspective and recognize that there is an important role for them to play in the process, regardless of whether they work at an elementary, middle school, or secondary school level. From an assessment perspective, school psychologists need to become more informed about interest and aptitude assessment, and other more experientially based vocational assessment techniques such as work sampling, situational assessment, and simulated work experiences. Additionally, school psychologists need to become better acquainted with the vocational relevance of the assessment data they currently gather. While some experts will argue that intelligence and academic achievement test data have only minimal relevance to vocational planning, personality assessment data have tremendous relevance and is an integral aspect of most theories of career development. School psychologists need to learn how to gather and use such data in a manner that easily translates into vocational recommendations. Readers are referred to this chapter's annotated bibliography for references that can be used to upgrade knowledge in these areas.

BASIC CONSIDERATIONS

The planning and implementation of vocational assessment services should be guided by two overriding concerns: vocational/career development theory and the skills needed by individuals to make decisions that will lead them into jobs that they both enjoy and in which they perform well. While the latter determines which traits should be assessed as part of a comprehensive vocational assessment, the former determines when these traits should be assessed, and how the resulting data will be interpreted.

Vocational/Career Development Theory

Developmental theory underlies and guides the appropriateness of any assessment or educational intervention. Just as our interpretation of letter reversals and transpositions in writing is influenced by our understanding of perceptual-motor development (that is, we would not be overly concerned about a 6 year old who evidenced letter reversals but would be concerned about a 12 year old who did), so too is our interpretation and use of vocational data influenced by vocational/career development theory. To design and implement a school-based vocational assessment program, one must understand vocational development theory, and use such knowledge in deciding what traits will be measured in a particular individual at any given grade or age level. Similarly, vocational development theory allows results to be placed in perspective, and allows users of the data to generate developmentally appropriate recommendations for the student.

While there are numerous theories of vocational development, Figure 1 depicts the various stages of development that span the school years as suggested by Super (1957) and Ginzberg, Ginsberg, Axelrad, and Herma (1951). Not all individuals progress through the various stages listed at the same rate, and not all students are capable of accomplishing the objectives at each stage without assistance. One purpose of vocational assessment is to determine if a student is progressing through the developmental stages at an acceptable rate or if the student might need assistance in accomplishing the objectives associated with each stage.

During the elementary school years, children begin to learn about themselves and the world of work through play. They fantasize themselves to be police officers, teachers, doctors, ballerinas, etc., and try on various life roles. They also begin to learn about the value and importance of work and how to interact and work with others. As children get older and move into middle school or junior high school, self and occupational awareness is refined, decision-making skills begin to develop, and tentative interests and aptitudes emerge. In high school, students begin to combine their knowledge of themselves with their understanding of occupations and, utilizing their decision-making skills, begin to make tentative career choices.

Skills Needed for Employment

Clearly, different jobs require different sets of skills for success. For example, success as a school psychologist is more dependent upon general cognitive ability and verbal skill than it is upon manual dexterity and spatial aptitude. The opposite is true of success as a carpenter or plumber. However, there are some traits that are universally important for success in any employment setting. The ability to get along with others (social skills) and the ability to make good decisions (decision making skills) are general skills that are important in all jobs.

A comprehensive vocational assessment incorporates an evaluation of psychological, social, educational/academic, physical/medical, and vocational functioning. Figure 2 depicts the domains that should be part of a comprehensive vocational assessment, and the information within each domain which might be gathered. It is important to note that much of the

Figure 1. Developmental tasks by stage of career development and age

STAGE	*GROWTH*			*EXPLORATION*		
Substage	*Fantasy*	*Interest (What do I like?)*	*Capacity (What am I good at?)*	*Tentative (What will I do......*	*Transition ....)*	*Trial*
Estimated age range	*0—10*	*11–12*	*13–14*	*15–17*	*18–21*	*22–24*
Tasks	1. Gain awareness of personal qualities and develop a healthy self-concept. 2. Appreciate and consider the broad variety of careers and acquire knowledge of workers, their roles, and the value of work. 3. Develop a broad, flexible, and satisfying sex role identity. 4. Develop attitudes that are conducive to competence, cooperation, and achievement.		1. Gain awareness of aptitudes and values. 2. Develop decision-making, planning, and problem-solving skills. 3. Realize that different occupations have different requirements and provide different rewards. 4. Become aware of imminent academic choices and their relationship to post-high-school alternatives. 5. Assume responsibility for own career-related decisions.	1. Gain awareness of aspiration. 2. Develop tentative career goals and identify vocational options. 3. Explore tentative career goals and vocational options.	1. Specify a choice. 2. Acquire necessary skills for entry-level employment	1. Implement vocational choice (acquire a job).

information that needs to be gathered as part of a comprehensive vocational assessment is typically obtained by school psychologists when conducting psychoeducational evaluations. Intelligence test data, academic achievement test data, personality data, etc., all have relevance in vocational planning. While it is beyond the scope of this chapter to discuss the vocational implications of traditional psychoeducational test data, readers who are interested in a more detailed discussion of this are referred to Levinson (1993, 1998).

A variety of techniques are employed to collect information in vocational assessment programs. Record reviews, interviews, observations, and paper-

Figure 2 . Type of information in vocational assessment

Psychological Functioning

- Emotional Stability
- Needs
- Temperament
- Values
- Intelligence
- Behavioral Tendencies

Social Functioning

- Adaptive Behavior
- Social/Interpersonal Skills
- Independent Living Skills
- Hygiene

Educational/Academic Functioning

- Receptive/Expressive Language (Oral, Written)
- Reading Skills
- Mathematic Skills
- Range of Knowledge (General Information)

Physical/Medical Functioning

- Vision
- Hearing
- Health
- Strength
- Dexterity/Motor Skills
- Endurance

Vocational Functioning

- Vocational Interests
- Vocational Aptitudes
- Work Habits/Attitudes
- Vocational/Career Maturity

and-pencil tests are commonly employed and are techniques with which school psychologists are familiar. Additionally, performance tests, work samples, and situational assessment are often used in such programs. Performance tests are manipulative tasks that minimize the use of language (Anastasi, 1982), and are designed to evaluate a specific ability believed to be related to successful job performance. A performance task may measure manual dexterity, an ability related to the performance of many trade and technical occupations, by requiring a student to assemble a series of nuts and bolts (Anderson, Hohenshil, Buckland-Heer, & Levinson, 1990). Work samples are samples of actual work that allow individuals to experience work activities related to a particular job. An automotive work sample might require an individual to change the oil in a car, and a clerical work sample might require an individual to file papers, type a memo, etc. Work samples usually consist of demonstration, training, and assessment phases. The task is first demonstrated to the individual being assessed; the individual is then trained to perform the task; and, last, the individual performs the task while being observed and evaluated. Performance may be compared to industrial and age-based norms, and interest and motivation to perform the task are observed and measured. Situational assessment techniques are designed to test an individual's interests, aptitudes, and work habits in a real or simulated work situation. A student who is interested in sales occupations might be employed in a school store and observed and evaluated by a business education instructor. A student who is interested in a food service job might be employed in the school cafeteria and observed and evaluated by cafeteria workers and/or an occupational foods instructor.

BEST PRACTICES

The following section will discuss best practices in establishing school-based vocational assessment programs, a recommended program model, and roles for school psychologists in the vocational assessment process. Consistent with the best practice standards listed by the Interdisciplinary Council on Vocational Evaluation and Assessment (of which NASP is a member) (Smith et al., 1995), vocational assessment should (a) be an ongoing and developmental process linked to career development, (b) incorporate multiple assessment methods, (c) involve a variety of professionals, and (d) be an integral part of a larger service delivery system. The nature and type of vocational assessment program to be established will depend on several factors, including the available resources, the characteristics and expertise of available personnel, the population targeted for services, the nature and type of vocational and post-secondary training and placement options available in the community, and the nature of auxiliary services available.

Steps in Program Development and Implementation

In that school-based vocational assessment services should be part of a broader service delivery system designed to meet the educational needs of all students in general, and students with disabilities in particular, time needs to be devoted to carefully planning and implementing a system-wide program. The steps involved in planning and implementing school-based vocational assessment programs encompass three phases: Planning and Development, Implementation, and Evaluation and Improvement (Levinson, 1993). Figure 3 summarizes the program development process.

The first step in program development is to develop a task force that adequately represents all school and community personnel who are likely to be involved in or affected by the assessment program. The task force conducts a needs assessment identifying school and community resources/services that can be utilized within the program and potential obstacles that may exist to successful vocational planning. An assessment model should then be developed that makes use of local resources and minimizes potential obstacles to programming. Formal interagency agreements are established between school and community agencies that clearly identify what services will be provided by which agencies, to which students, and at what point in time. Funding requirements are identified and sources of funding secured, if necessary. A coordinator is appointed to oversee the implementation of the assessment program and, with the assistance of other involved personnel, identifies sites at which assessments will be conducted, develops a manual that clearly describes procedures, selects and purchases equipment, and trains involved personnel. Following workshops designed to acquaint school and community personnel with the program, the pro-

Figure 3. Steps involved in program development

Phase 3 – Evaluation

1. Identify Aspects of Program in Need of Evaluation
2. Identify Standards for Evaluation
3. Hire/Identify a Program Evaluator
4. Conduct Evaluation
5. Plan and Implement Program Improvements

Phase 2 – Implementation

1. Hire a Vocational Assessment Program Coordinator
2. Select Vocational Assessment Site(s)
3. Develop a Procedure Manual
4. Select/Purchase Materials and Equipment
5. Train Personnel
6. Conduct In-service Workshops with School Staff/Community
7. Pilot-Test the Assessment Program
8. Revise and Implement the Program

Phase 1 – Planning and Development

1. Develop a Task Force
2. Conduct a Needs Assessment
3. Develop a Program Model and Establish Objectives
4. Develop Local Interagency Agreements/Action Plans
5. Identify Funding Requirements and Sources

gram is pilot tested on a small select target group, modified and revised, and then fully implemented. After the program has been in operation for a predetermined period, the program is evaluated and revised as necessary.

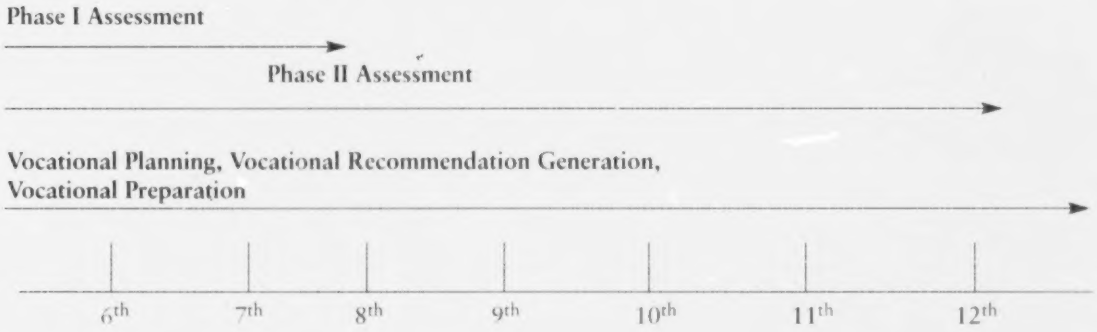
Program Models

Most school-based vocational assessment programs employ several levels of assessment. At different levels the assessment process has different purposes, is designed to answer different questions (based upon developmental objectives and referral concerns), uses different assessment techniques and strategies, and is designed to gather different types of information. The nature and purpose of assessment at a particular level is directly related to the developmental objectives discussed previously, and to specific referral concerns. Programs usually consist of either two or three levels of assessment. As summarized by Anderson, Hohenshil, Buckland-Heer, and Levinson (1990) (Figure 4), level 1 assessments begin during the elementary school years, focus on a child's understanding of self, interpersonal skills, and decision-making skills, utilize vocational and career exploration activities, and have the goal of building self awareness. Typical assessment questions to be answered at this level include the following ones: Does the student have adequate understanding of their strengths and limitations, has the student acquired necessary social and interpersonal skills, has the student acquired an appreciation for work, and has the student acquired effective decision making skills? Level 2 assessments generally occur during the middle school or junior high school years; focus on interests, aptitudes, work habits and career maturity; utilize record reviews, interviews, observations, and standardized norm referenced assessment instruments; and have the goal of continuing to encourage career exploration and assisting individuals in making tentative choices regarding educational and career goals. Typical assessment questions include the following ones: What are the students interests, what are the students aptitudes, what occupational areas/vocational training programs might be appropriate for the student to explore, what program modifications and support services might the student need to be successful in their chosen program, and is the student ready to make a choice about which vocational program in which to enroll. A level 3 assessment generally occurs during the high school years, often employs more experientially based devices such as work samples and situational assessment, and focuses upon the specific training needed to obtain post-school education or employment. Level 3 assessments are also designed to determine what skills an individual may need in order to make a successful transition from school to work, post-secondary education, and community living. Typical assessment questions include the following ones: What services will the student need to make a successful transition to post-school life, has the student acquired job seeking skills, and what additional training does the student need in order to be employable?

TRANSDISCIPLINARY SCHOOL-BASED VOCATIONAL ASSESSMENT

Though the nature and type of vocational assessment program developed in a particular locale will depend on the factors listed previously, I advocate a transdisciplinary school-based vocational assessment (TVA) program model (Levinson, 1993) as a framework for the development of local programs. TVA is defined as follows:

Figure 4. Vocational assessment and programming continuum


Phase I Assessment
Phase II Assessment
Vocational Planning, Vocational Recommendation Generation, Vocational Preparation
6th
7th
8th
9th
10th
11th
12th

Interfacing of Vocational Assessment with Special Education Triennial Re-Evaluation

Student's Triennial Special Education Re-evaluation	Phase I Assessment	Phase II Assessment
6th Grade	6th Grade	9th Grade - or when needed
7th Grade	6th - 7th Grade	10th Grade - or when needed
8th Grade	7th - 8th Grade	11th Grade - or when needed

> A comprehensive assessment conducted within a school setting whose purpose is to facilitate educational and vocational planning in order to allow a student to make a successful adjustment to work, post-secondary education and community living. The assessment is conducted by educational, community agency, and state agency personnel, in cooperation and consultation with the student's parents, and incorporates an assessment of the student's psychological, social, educational/academic, physical/medical, and vocational functioning.

The term "transdisciplinary" is used instead of "multidisciplinary" in order to depict the need to involve professionals "across disciplines" (and outside of the schools) in the vocational assessment and planning process. Figure 5 depicts the transdisciplinary school-based vocational assessment program model that links assessment and intervention, and involves school and community-based professionals in both the planning and development of the program, and in the gathering and use of data. Four phases that embody two levels of assessment are included in the TVA model. Phase 1 involves planning, organizing, and implementing the assessment program. Community agency and school personnel are involved in this planning, which would follow the steps regarding program development discussed previously.

Phase 2 involves an initial level 1 vocational assessment that is conducted at some point between grades 6 and 9. This yields data that are used to establish educational and vocational objectives to be included in student's Individual Education Plans. These data are used to tentatively identify vocational training options for students, options that can form the basis for further vocational exploration. Data are also used to identify residential living options for the student, curricula modifications that might be necessary in order for the student to achieve success in vocational training, and school or community services the student may require to make a successful transition from school to work, post-secondary education, and community living.

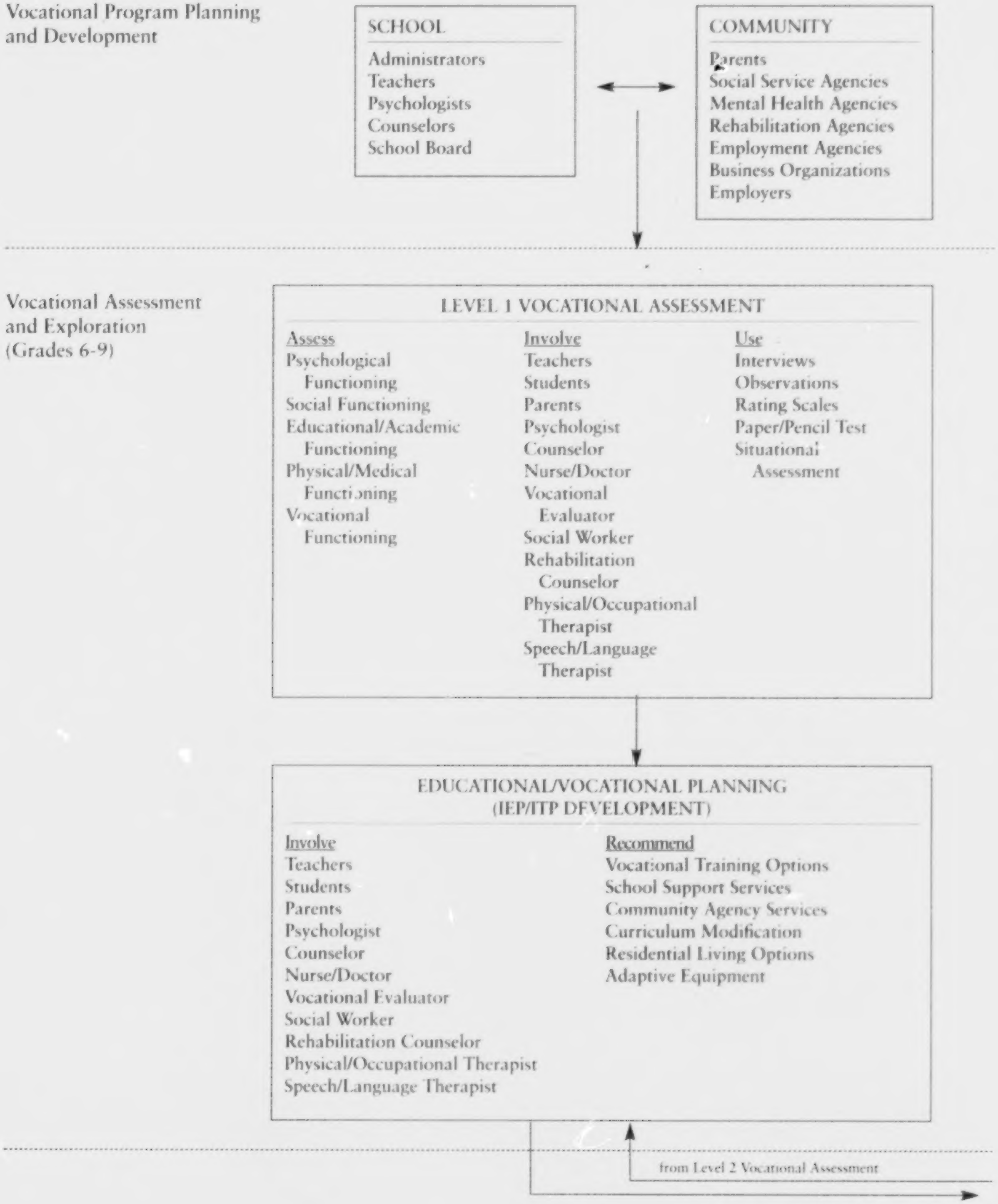
Phase 3 occurs during grades 10–12, and consists of specific vocational training (which may occur in a variety of settings). A level 2 vocational assessment may be conducted should additional problems or questions arise about the appropriateness of this training. Following this assessment, a revised educational/vocational plan can be developed for the student, and modifications in training can be initiated. Phase 4 follows this training, and involves placement in a job, a post-secondary institution, and/or a residential living facility. To facilitate successful transition from school to work and community living, follow-up and ongoing support can be provided as part of this phase.

Roles for School Psychologists

The role of the school psychologist in a vocational assessment program will vary depending upon the nature of the vocational services available in the district and the expertise of other involved school personnel. In a best practice scenario, a school-based vocational assessment program similar to the model previously described will be in operation, and the school psychologist will be one of several school and community-based professionals working as a member of a team. Working alongside teachers, counselors, and representatives from Vocational Rehabilitation and Social Services for example, the school psychologist might be responsible for gathering information regarding a student's intellectual, academic, and social functioning and interpret this data from a vocational perspective. When working with adolescents, the school psychologist might include measures of vocational interests and aptitudes in their assessments, review the student's work history and performance in vocational classes, observe the student in work and/or simulated work settings, and conduct clinical interviews to gather vocationally relevant data. As a team member, the school psychologist might use their psychometric and measurement knowledge to assist in the selection of instruments and techniques to be used. The school psychologist's knowledge of learning theory and of adolescent psychology will also allow them to assist in individual vocational planning and to act as consultants for others who are involved in vocational programming.

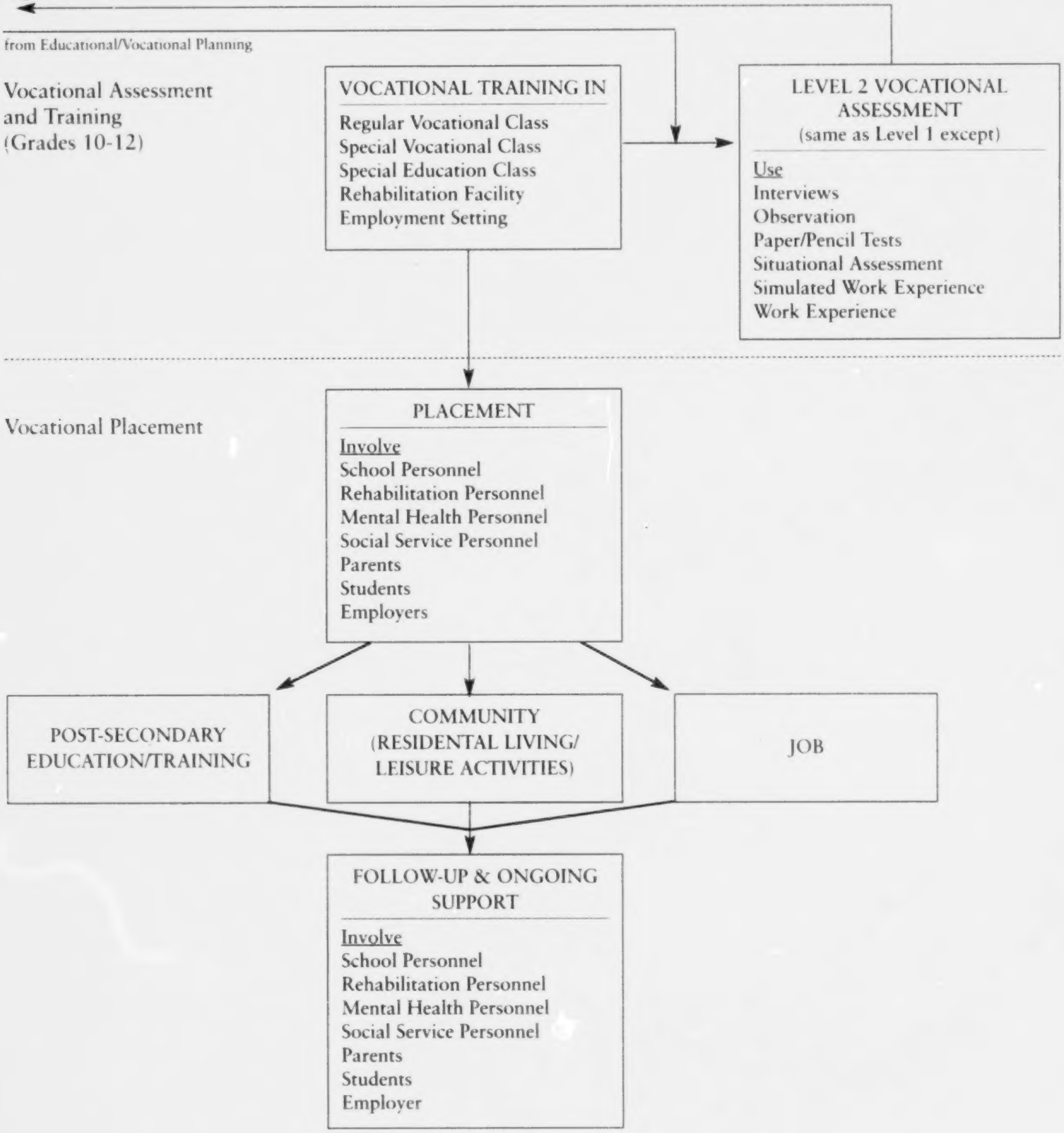
Where an organized, school-based vocational assessment program is not in operation, the school psychologist might assume the lead in the development of such a program or assist others in such devel-

Figure 5. **Transdisciplinary school-based vocational assessment model**


Vocational Program Planning and Development
SCHOOL
Administrators
Teachers
Psychologists
Counselors
School Board
COMMUNITY
Parents
Social Service Agencies
Mental Health Agencies
Rehabilitation Agencies
Employment Agencies
Business Organizations
Employers
Vocational Assessment and Exploration (Grades 6-9)
LEVEL 1 VOCATIONAL ASSESSMENT
Assess
Psychological Functioning
Social Functioning
Educational/Academic Functioning
Physical/Medical Functioning
Vocational Functioning
Involve
Teachers
Students
Parents
Psychologist
Counselor
Nurse/Doctor
Vocational Evaluator
Social Worker
Rehabilitation Counselor
Physical/Occupational Therapist
Speech/Language Therapist
Use
Interviews
Observations
Rating Scales
Paper/Pencil Test
Situational Assessment
EDUCATIONAL/VOCATIONAL PLANNING (IEP/ITP DEVELOPMENT)
Involve
Teachers
Students
Parents
Psychologist
Counselor
Nurse/Doctor
Vocational Evaluator
Social Worker
Rehabilitation Counselor
Physical/Occupational Therapist
Speech/Language Therapist
Recommend
Vocational Training Options
School Support Services
Community Agency Services
Curriculum Modification
Residential Living Options
Adaptive Equipment
from Level 2 Vocational Assessment

(Figure continues on the following page.)

Figure 5. (continued)


from Educational/Vocational Planning
Vocational Assessment and Training (Grades 10-12)
VOCATIONAL TRAINING IN
Regular Vocational Class
Special Vocational Class
Special Education Class
Rehabilitation Facility
Employment Setting
LEVEL 2 VOCATIONAL ASSESSMENT
(same as Level 1 except)
Use
Interviews
Observation
Paper/Pencil Tests
Situational Assessment
Simulated Work Experience
Work Experience
Vocational Placement
PLACEMENT
Involve
School Personnel
Rehabilitation Personnel
Mental Health Personnel
Social Service Personnel
Parents
Students
Employers
POST-SECONDARY EDUCATION/TRAINING
COMMUNITY (RESIDENTAL LIVING/ LEISURE ACTIVITIES)
JOB
FOLLOW-UP & ONGOING SUPPORT
Involve
School Personnel
Rehabilitation Personnel
Mental Health Personnel
Social Service Personnel
Parents
Students
Employer

opment. The school psychologist's expertise in psychometrics and measurement can be used to design an assessment program that incorporates sound, reliable, and valid instrumentation. If the development of a comprehensive vocational assessment program involving several professionals is not possible, then school psychologists may find themselves as the sole person involved in vocational assessment. Though this is far from a best practice, school psychologists may then wish to consider incorporating a vocational component in each evaluation conducted with an adolescent. Such a component could include measures of vocational interests, aptitudes, work habits, and career maturity, as well as traditional psychoeducational measures. There are many time- and cost-efficient instruments available to assess these traits, and school psychologists are referred to this chapter's annotated bibliography for references summarizing these instruments. In that many school psychologists find themselves in such "a not so best practice" situation, a scenario describing how a school psychologist might function in such a situation is included in Appendix A. Further, readers who are interested in a more thorough description of the roles school psychologists can assume in vocational and transition planning are referred to Levinson & Murphy (1999).

SUMMARY

Work is an integral aspect of American life. The extent to which one successfully adjusts to work influences physical and psychological well being, and overall quality of life. It is important to ensure that individuals develop the skills they need in order to secure and maintain satisfying and productive work once they leave school.

Students in general, and students with disabilities in particular, are not being adequately prepared for work by our public schools. Though the overwhelming percentage of students, particularly those with disabilities, do not pursue post-secondary education and leave high school in search of employment, our schools typically emphasize an academic program designed to prepare students for post-secondary education. As a consequence, many students, particularly those with disabilities, find that the education they are receiving does not meet their needs and eventually drop out of school.

Vocational assessment is designed to provide the information needed by school personnel to facilitate educational and vocational planning of students, the goal of which is to allow students to acquire the skills they need to make a successful transition to work and community life. This assessment involves a variety of school and community personnel, and includes an evaluation of the student's psychological, educational/academic, physical/medical, vocational, and social functioning.

School psychologists have a critical role to play in the vocational assessment process. In particular, the school psychologist's psychometric expertise and knowledge of measurement theory can safeguard against the inappropriate selection and use of assessment devices in assessment programs, and the inappropriate interpretation and use of assessment data; their skills in assessment can be used to generate data (i.e. intelligence, achievement, personality, social skills, etc.), which are necessary for effective vocational planning; and their knowledge of learning and behavior theory and of adolescent psychology can be used in the effective development and implementation of services.

However, if school psychologists are to increase their involvement in vocational and transition related activities, then the profession as a whole must demonstrate greater commitment to the area. While tacit acceptance of the importance of vocational- and transition-related activities is reflected in NASP standards for practice, that school psychologists can graduate from NASP-accredited programs with virtually *no* training in the area suggests a lack of true commitment. Historically, school psychologists have worked with students who have disabilities and in the shadow of special education. The high unemployment and underemployment rates and the elevated drop-out rates that exist among this population of students clearly suggest that traditional service delivery has not resulted in desirable outcomes and that a change in focus is needed. It is time for school psychologists to accept some of the responsibility for these outcomes and to give the vocational and transition needs of students the same emphasis in assessment that they give to the cognitive, academic, and social needs of the students with whom they work.

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Clark, G. B. (1998). *Assessment for transitions planning: A guide for special education teachers and related service personnel.* Austin, TX: PRO-ED.

This book discusses areas that need to be assessed for transition planning. It includes a discussion of instrumentation and different assessment techniques such as computerized assessment, curriculum-based assessment, and medical appraisals. The book discusses accommodations in assessment practices that may need to be made for individuals with disabilities, and roles of various professionals in transition assessment. Appendices are included that summarize assessment instruments and that include transition-planning examples.

Kapes, J. T., Mastie, M. M., and Whitfield, E. A. (1994). *A counselor's guide to career assessment instruments* (3^{rd} ed.). Alexandria, VA: National Career Development Association.

This book summarizes uses and technical characteristics of frequently used vocational assessment instruments. Measures of interests, aptitudes, work values, and career maturity are included, as well as sections on test selection and instruments for use with individuals with disabilities.

Levinson, E. M. (1998). *Transition: Facilitating the post-school adjustment of students with disabilities.* Boulder, CO: Westview.

This book conceptualizes assessment as a necessary first step in transition planning, and discusses assessment within the context of a transdisciplinary transition model. Assessment techniques and domains are discussed as they relate to transition planning, training, placement, and follow-up activities.

Levinson, E. M. and Brandt, J. (1997). Career development. In G. Bear, K. Menke, and A. Thomas (Eds.), *Children's Needs II.* Washington, DC: National Association of School Psychologists.

This chapter summarizes the career development stages through which school age children progress, identifies common career choice problems experienced by the school aged population, and discusses both systemic and individualized actions school psychologists and other school personnel can take to facilitate the career development process of the students with whom they work.

Power, P. W. (2000). *A guide to vocational assessment* (3^{rd} ed.). Austin, TX: PRO-ED.

Though oriented toward rehabilitation rather than school-based professionals, this book addresses issues in developing effective vocational assessment services, and includes chapters on interviewing, interest assessment, aptitude assessment, intelligence testing, and personality assessment.

Seligman, L. (1994). *Developmental career counseling and assessment* (2^{nd} ed.). Thousand Oaks, CA: Sage.

This book discusses the career development needs of individuals at different life stages, and discusses the various assessment instruments and techniques, which are appropriate for use at these different stages. Case studies are provided for each life stage discussed to illustrate the career development issues, assessment techniques, and counseling strategies applicable to each stage. Though not specific to individuals with disabilities, the book provides an overview of career assessment through the life span. Of its 10 chapters, school psychologists may find only two (chapter 8 on Middle Adulthood and chapter 9 on Later Adulthood) that may not be applicable to their practice.

Smith, F,. Lombard, R., Neubert, D., Leconte, P., Rothernbacher, C. & Sitlington, P. (1995). *Position paper of the Interdisciplinary Council on Vocational Evaluation and Assessment.* Available at:
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The Interdisciplinary Council on Vocational Evaluation and Assessment is composed of representatives from 11 organizations, including NASP, and represents the issues and concerns of personnel involved in vocational assessment across settings and disciplines. This position paper addresses best practice issues across settings, and identifies competencies that all providers of vocational assessment should possess.

APPENDIX A

A "Not Best Practice But Not Bad Example"

A school psychologist who works in a district with no organized, school-based vocational assessment program is asked to complete a reevaluation on Sharon, a tenth grade student with a learning disability. Sharon had been identified as having a reading disability in the fourth grade and reevaluated in the seventh grade. After reviewing both cumulative and confidential files, the school psychologist notes that Sharon has consistently demonstrated above-average intelligence but slightly below-average academic achievement, particularly in those areas that emphasize reading. Grades in academic classes have consistently been Cs, except in art and music classes where she consistently received As. Previous evaluations had suggested Sharon to be reasonably creative and adept at performing tasks that required visual reasoning and auditory processing (on a WISC-III she demonstrated a significant verbal-performance discrepancy in favor of the performance score; on a WJ-III, her highest score was in Gv; her next highest score was in Ga). However, she was said to be shy and had some difficulty getting along with others.

Given the consistent findings of the two previous intellectual and academic assessments, the school psychologist chose not to conduct another intellectual or academic (other than reading) assessment. Instead, the psychologist began by interviewing Sharon. In the interview, the school psychologist asked Sharon about her post-school plans (she wanted to go to college and major in art or music, but her parents did not think she could and wanted her to work in the family's convenience store), her social relationships and leisure interests (she had one close friend, did not participate much in school activities, and preferred solitary leisure activities like drawing and playing guitar), her independent living skills (she could do everything on her own but her parents baby her), and her previous work experiences (she had cut lawns and had worked in the family convenience store).

Next, the school psychologist interviewed Sharon's parents and addressed these same areas. Her parents indicated that they did not think Sharon could be successful in college because "she cannot read," and expected her to work in the family convenience store and live at home upon graduation. They confirmed that Sharon was shy, had few friends, and preferred solitary activities. They added that based on their observation of her cutting lawns and working in the convenience store, her work habits were not particularly well developed. Interviews with Sharon's teachers confirmed what the school psychologist had previously learned about Sharon. To further assess work habits and with both Sharon's and her parent's permission, the school psychologist conducted an observation at the convenience store where Sharon worked on weekends, contacted families for whom Sharon cut lawns, and interviewed Sharon's teachers. On the basis of the information gathered, the school psychologist chose to conduct an assessment of social skills (Sharon, her parents, and her teachers all completed a social skills questionnaire). Additionally, the school psychologist assessed Sharon's reading by using both standardized norm-referenced tests and informal curriculum-based techniques using her textbooks. Sharon's ability to make vocational decisions on her own was assessed through use of a career maturity measure. Her vocational interests were assessed through interview and use of a paper-pencil inventory appropriate for her reading level. Given Sharon's level of intelligence and her interest in attending college, an attempt was made to identify a list of potential college majors that conformed to her identified interests. Last, a transition planning inventory completed by Sharon, her parents, and her teachers was used to identify any other areas of need across all legislatively mandated transition areas.

In the staffing that followed the assessment, the school psychologist presented his results. He indicated that Sharon had adequate self- and occupational awareness, and seemed capable of making a realistic vocational decision on her own. Further, she seemed to have both the interest and aptitude necessary to be successful and happy in jobs that revolved around her stated interests in art and music. In particular, Sharon seemed best suited for artistic occupations that emphasized her strengths in visual and auditory processing and that generally entailed solitary work. In addition, she seemed to possess the ability to complete the postsecondary education requirements necessary for entry into these fields, if she were to be provided with accommodations for her reading disability. However, shyness (and an inability to advocate for herself), social skills and work habit deficits, and parental expectations were issues that might also impede successful transition and training. The school psychologist recommended that Sharon participate in a social skills training program that he conducted (to improve areas of deficit and to teach advocacy skills that would be necessary for success in any post-secondary educational setting), and recommended that Sharon (with the assistance of the guidance counselor) continue to explore occupational areas of interest by interviewing and shadowing professionals in these areas (and by offering to do volunteer work for these professionals if interested) and by reviewing the educational requirements for the college majors generally associated with entry into these fields. The school psychologist also recommended that Sharon consider volunteering at the high school television or radio station (to explore audio and video production, artistic areas she had little knowledge of, or experience with), join the art club, and consider joining band or chorus. The school psychologist also recommended that Sharon and her parents become familiar with the services offered to students with disabilities at local colleges, and offered to assist in setting up such a meeting. Strategies to assist Sharon in compensating for her reading difficulties were developed. In particular, because Sharon's listening comprehension had consistently been measured as above average, books on tape was one compensatory strategy that seemed promising. The school psychologist also volunteered to enter into a short-term counseling relationship with Sharon and her parents to address parental expectations and post–high school aspirations. On the basis of this meeting, a transition component to Sharon's IEP was developed, with the intent to review, evaluate, and revise it the following year.

100 Best Practices in Transition to Post-Secondary Work

Raymond Witte
Miami University

OVERVIEW

This chapter examines the transition from secondary school to the adult world for individuals with disabilities. In the field of special education at least two major educational transitions are formally acknowledged, although additional transitions exist and are recognized: preschool to elementary and high school to adult life. The notion of school transition has usually been associated with the end of the educational career of a student. In the traditional approach, plans and services, usually provided at the secondary level, served as a connector between the school and the adult world.

Halpern (1992, p. 203) has described the secondary transition phase "as a period of *floundering* that occurs for at least the first several years after leaving school as adolescents attempt to assume a *variety* of adult roles in their communities." He envisions the goals of transition dealing with the broader issues of adult adjustment as opposed to just the area of employment. In addition, a life-span approach to services is seen as beneficial and essential for preparing youth with disabilities if they are to experience satisfaction with both employment as well as adult life. Focus on life-span services and outcomes for successful work transition and employment has increased as transition has been refined to an outcome directed process (Individuals with Disabilities Education Act of 1990 (IDEA 1990)). However, current findings have indicated that students with disabilities often lack the necessary academic and functional work skills necessary for post-school employment or post-secondary education (Phelps & Hanley-Maxwell, 1997).

The transition from school to the adult world is difficult for many identified students. The reality for many special needs students is that their learning and behavioral challenges continue through adulthood and ultimately into the world of work. Acknowledging this "reality" is vital because it serves as an Individual Education Plan (IEP) planning focus point. Long-term educational planning involving the development of essential, functional life skills (e.g., academic, behavioral, and social) throughout a student's educational career must exist along with service continuation after graduation. A long-term perspective is essential if successful adult employment and general life satisfaction are viewed as desired outcomes for special needs learners.

Before addressing model practices and services for adults with disabilities, current knowledge about youth with disabilities and their skills as they enter the workplace will be examined. Past and current legislation will be briefly reviewed followed by current "status" profiles of youth with disabilities. Finally, potential roles and responsibilities school psychologists can have in the transition process will be discussed.

Background

Vocational services for students with disabilities can be traced back 60 years ago to the Second World War. However, major legislative action involving a direct vocational focus occurred during the 1970s primarily through three laws: the Vocational Rehabilitation Act of 1973, the Education for All Handicapped Children Act of 1975, and the Vocational Education Amendments of 1976. This federal legislation, despite limited interagency cooperation and implementation, helped to direct attention and effort toward the vocational preparation of adolescents with disabilities (Szymanski & Danek, 1985).

Emphasis on serving individuals with disabilities was increased in legislative action during the 1990s. The Rehabilitation Act Amendments of 1992 involved the reauthorization of the Rehabilitation Act of 1973, which provided for smoother service integration for identified students leaving public school and obtaining employment (Wood & Test, 1997). The Tech-Prep Act was created from the amended Perkins Vocational and Applied Technology Education Act. It was designed to provide academic instruction that was work or occupation centered and involved a competency-based curriculum focused on functional academic, thinking/higher reasoning, and personal, life skills (Evers, 1996b).

Specific legislative action on work transition involved the School-to-Work Opportunities Act. Passed in 1994, the School-to-Work (STW) program involving school- and work-based learning components along with connecting activities was designed to help all students (including those with disabilities) to obtain vital work skills and experiences before they enter full-time employment or postsecondary education (Evers, 1996a). Under IDEA 1990, all identified students were required to have transition plans within their IEPs by the age of 16. In the Individuals with Disabilities Education Act Amendments of 1997, all students with disabilities are required to have a statement of transition in the IEP by age 14 and by age 16 (or younger as determined by the IEP team) a statement of needed transition services must exist (U.S. Department of Education, 1999; IDEA 1997 Amendments, P.L. 105-17).

The Americans with Disabilities Act (ADA) passed in 1990 included protections designed to prohibit hiring and employment discrimination against individuals with disabilities. The ADA helped to create equal rights and opportunities for individuals with disabilities while increasing public awareness and acceptance to the issues of disability particularly in the workplace. However, despite continued legislative action and upgraded service delivery for school-to-work transition, dropout and unemployment figures for individuals with disabilities have been devastating (D'Amico, 1991; Phelps & Hanley-Maxwell, 1997). Moreover, involvement of special needs students in organized work experience and transition programs such as STW has been disappointingly low (Unger & Luecking, 1998). Considerable evidence has been found that high school vocational training has either been ineffective or nonexistent for individuals with learning disabilities (LD) (Grayson, Wermuth, Holub, & Anderson 1997). Despite legislative support, special needs students transition to work or other post-secondary experiences often lacking well-defined functional life skills, essential work skills, and on-the-job training.

Status of Students With Disabilities

School psychologists view themselves as problem solvers. However, within the problem-solving model, Deno (1995) points out that a proactive position is essential if substantial change is expected between a current and a future state of affairs. Since formal instruction, by design, organizes and eventually directs educational outcomes, a systematic "end-product" focus and standard must exist and be embedded within the special education delivery model. In particular, the desired graduate in special education should possess skills and competencies that would make him or her a competitive employee or post-secondary student along with a competent and functional member of society. This long-term, total package approach requires a proactive problem-solving stance for special needs students and their transition from school to the adult world. Short-sighted, poorly integrated, academic-only focused IEPs are not consistent with the long-term life-span approach that needs to exist for every identified student. School psychologists must ensure that the long-term perspective is acknowledged and maintained through the IEP process along with the continued emphasis of developing functional life skills concomitant with anticipated academic progress.

The current post-secondary picture for students with disabilities is not a pretty one. High school graduation rates for individuals with disabilities vary from state to state because of graduation requirements, exit exams, etc., but they are typically lower than their non-identified peers. According to the twenty-first annual report to Congress (U.S. Department of Education, 1999) 24.5% of all students with disabilities during the 1996–1997 school year graduated with a standard high school diploma, a slight increase from the previous year (24%). Graduation percentages varied according to disability categories:

1. Speech and language impairments, 34.6%
2. Visual impairments, 30%
3. Traumatic brain injury, 30%
4. Specific LD, 29.4%
5. Hearing impairments, 28.5%
6. Other health impairments, 25.7%
7. Orthopedic impairment, 23.7%
8. Emotional disturbance, 21.4%
9. Deaf-blindness, 14.7%
10. Mental retardation, 13.43%
11. Multiple disabilities, 8.94%
12. Autism, 7.5%

Initiated in 1987, the National Longitudinal Transition Study (NLTS) was a 5-year study designed to investigate the educational and postsecondary performance of more than 8,000 special education youth between the ages of 13 and 21. This study represents the largest and most comprehensive study of educational and employment outcomes for students with disabilities (Blackorby & Wagner, 1997). The immediate- and long-term results for these individuals with disabilities were very discouraging.

For students with LD:

1. 28% dropped out of high school
2. 19% of graduates were enrolled in postsecondary academic programs
3. 18% were enrolled in postsecondary vocational programs
4. 34% had independent living status

For students with emotional or behavioral disabilities:

1. 48% dropped out of high school
2. 15% of graduates enrolled in postsecondary academic programs
3. 13% were enrolled in postsecondary vocational programs

For students with mental retardation:

1. 30% dropped out of high school
2. 2% of graduates enrolled in postsecondary academic programs
3. 6% were enrolled in postsecondary vocational programs
4. 15% had independent living status

An employment rate of only 55% for all youth with disabilities was demonstrated (Wagner et al., 1991), and females with disabilities were more likely to become wives and mothers and less likely to be employed when compared with males with disabilities (Blackorby & Wagner, 1996; D'Amico, 1991). However, employment rates for students with LD were comparable with or even exceeded the general population. Approximately 71% of graduates with LD (compared to 55% for all disabilities) were employed 3–5 years post-graduation as compared with 70% of the general population, yet the majority of students with disabilities were employed in low-skill jobs. Unfortunately, the dropout rate was high (almost 30%), and enrollment in post-secondary vocational programs was considerably less for dropouts than for non-dropouts (Blackorby & Wagner, 1997).

Overall, youths with disabilities still lag behind their non-disabled peers in educational attainment, thereby decreasing the likelihood of future employment advancement and earnings. Women with disabilities are less likely to be employed or possess independent living status when compared with men with disabilities, and minority status further limits employment and higher wage possibilities. As Blackorby & Wagner (1997, p. 73) have stated, the NLTS data served as an essential wake-up call for services and policy directions for students with disabilities.

Recently, the Office of Special Education Programs (OSEP) funded seven projects dealing directly with national assessment requirements. One of those seven projects will include the Longitudinal Study of Secondary and Postsecondary Outcomes for Students with Disabilities (NLTS-2). A cohort of students with disabilities will be followed through high school and into early adulthood. School and employment progress will be examined for this group, and the findings from this study will be used to direct educational policy and disability practices (U.S. Department of Education, 1999). Given the educational realities of special needs students it comes as no surprise that these youth continue to struggle with their learning challenges into their adult lives. Skill deficits do not typically fade away. Consequently, academic difficulties persist and may hinder later life and work adjustment.

BEST PRACTICES

In order to begin to change the school-to-adult world picture for special needs youth, the proactive tenet of the problem-solving model must predominate. Each school district, with community input, must generate a standard of expected competencies across all skill domains that each student's progress will be compared with. The educational community must have a very clear notion of what students should be able to do when they finish high school, a desired set of expected outcomes to use as the measuring standard. Throughout this process, the expectancy of reaching for higher levels of proficiency in all life functional skill areas including, for instance, academics, personal and community autonomy, and personal finance, must be recognized. Moreover, it must be understood that service support must be extended beyond the secondary level directly into the adult years as higher levels of autonomy or proficiency are sought. The highest levels of interagency collaboration are necessary in order for this to come about. And that collaboration and service integration must occur early in the educational process.

Transition should not be viewed as a discrete event but as a life-long, never-ending process; a careful, well-planned process that will be years old before the intended outcomes begin to be reached; a process that over time will involve numerous individuals, several administrative teams, professionals from outside agencies, family members, along with the identified student; and a process where all involved parties have responsibility and all share accountability.

Transition involves more than moving an individual with disabilities from the school setting to the adult world. Individual and local planning must coexist and be integrated for every identified student. Individual transition teams are essential at the school level while local core transition teams facilitate interagency school-to-work collaboration and cooperation. As Wehman, Moon, Everson, Wood, and Barcus (1988, p. 50) have stated, "Transition planning that results in improved outcomes of employment, independence, and community integration must be a cooperatively planned and implemented process at a local community level."

Upon review of exemplary state procedures, Furney, Hasazi, and Destefano (1997, p. 352) found that "there is no single recipe for change." However, when considering transition improvement Furney et al. (1997, p. 352–353) suggested examining the following guidelines, (a) "Define and highlight values and beliefs that foster the development and initiation of transition policies and practices," (b) "develop and implement federal and state policies on transition in ways that strengthen existing practice and empower communities to make change," (c) "reinforce a collaborative and comprehensive view of leadership," (d) "add or strengthen collaborative structures at the state and community level to promote high-quality transition practices and services," (e) "implement a variety of capacity-building and evaluation activities that empower local schools and communities to make change," (f) "include research and evaluation activities at all levels of implementation," and (g) "link current transition initiatives to related and future initiatives." Clearly, with transition programs one size does not fit all. Consistent with the tenets of the problem-solving model, individuation must be provided. As schools work toward developing their own programs, careful consideration to system structures and resources must be made.

At the school level, Wehman (1996) recommends a multi-step process for developing and implementing individualized transition plans (ITPs). An ITP involves the operating procedures for the school transition plan. It may include vocational skill profiles (strength oriented), actual transition goals for school and community, transition supports, as well as post-school follow-up procedures (Inge, Wehman, Clees, & Dymond, 1996). First, Wehman advocates for organizing ITP teams for all transition-age students. That would include the student and the school personnel who will serve on the team (e.g., parents, special educators, vocational educator) as well as the adult service representative who should be brought early into the process perhaps as early as 2 years prior to graduation. Next, a student support circle needs to be organized through person-centered planning. The strengths and talents, and not the weakness or identified deficits of the student, must be emphasized in the student's personal profile. Also, key activities that are thought to be essential for continued transition progress must be identified and completed.

Wehman (1996) contends that the transition meeting can be part of the annual IEP meeting; thereby connecting the ITP directly to the IEP goals and providing for a more integrated transition process. Implementing the actual ITP would then follow, acknowledging that some services may be short term while others may be conducted over a series of years. The ITP would have to be updated annually, and contact with adult services would increase as each student moves closer to graduation. Finally, at the end of the student's secondary education, an exit meeting would be necessary. Goals, met and unmet, would have to be examined. In addition, follow-up and follow-along services must be discussed and determined before each student leaves the school environment. Three factors that Wehman (1996, p. 101–102) believes to be critical to successful ITP implementation include " the involvement of ITP members who are knowledgeable about local services, the identification of all desired outcomes within the least restrictive service options, and community agencies providing or obtaining all needed services."

The local interagency core team has the responsibility of assessing, developing, and/or modifying transition procedures and guidelines between the participating agencies. Typical team representation may include at least a school representative, parent advocate, mental health board member, and a vocational rehabilitation representative. As part of this group, these members can review a variety of issues ranging from pre-employment training programs to general public awareness to more formal interagency policies, action plans, and evaluation procedures. Wehman's ITP approach is vocation/work focused but should incorporate other functional/adaptive skill expansion as well. Moreover, it can be directly attached, in procedure and in function, to the IEP. This creates shared importance and significance for this plan and increases institutional accountability regarding its implementation.

Kohler (1993) reviewed 46 transition studies and identified three critical model components: vocational training, parental involvement, and interagency collaboration and service delivery. Minskoff (1996, p. 282) identified the following essential components for transition programs for students with LD:

1. Individual transition plans
2. Vocational education and training
3. Work experience
4. Social skills training
5. Parent involvement
6. Interagency coordination
7. Integration with non-disabled persons in vocational and work settings
8. Academic support
9. Vocational counseling
10. Job seeking and job placement services
11. Personal counseling
12. Supportive services from an advocate
13. Program evaluation involving follow-up and follow-along

Similar components have been identified and recommended by others in the field (Zigmond, 1990; Phelps & Hanley-Maxwell, 1997). The resounding message that has emerged is that each identified student requires an individualized, integrated service delivery model with genuine participation from family, school, and community .

Minskoff (1996, p. 282) contends that a comprehensive transition plan must involve these three stages, "planning for transition, transition within the IEP, and implementation of the IEP." She contends that transition starts as soon as the child is identified with a disability. Therefore, services should be provided over the entire school career and involve several areas including academics, social skills, functional life skills, and career planning. High standards and proficiency are advocated in all areas. School transition plans require collaboration between the school and community. Student and parental involvement/advocacy is strongly encouraged in this process. Although, limited parental participation in transition planning has been reported (Winton, 1990) transition effectiveness is clearly enhanced when parents are involved (Hasazi, Gordon, & Roe 1985). The IEP must be current and present functioning levels known in order to make the best educational decisions. Goals of desired post-secondary outcomes should be developed in several areas such as employment, continuing education, and adult living. Consultation and collaboration between special and vocational education is viewed as essential. Finally, implementation should occur at both the school and post-school levels.

A TRANSITION CASE

Following Minskoff's model program, a transition focus should exist as soon as a child is identified. Therefore, if identified in the second grade, then the child's transition services should start at that time and continue throughout his or her school career and into adulthood. Along with appropriate academic and behavioral IEP goals, separate goals directed toward functional life skills, social and work skills, career exploration and training, post-secondary education, etc., should be considered, identified as part of the ITP, and directly connected and annually reviewed as part of the IEP. The emphasis at the elementary level should be academic with intensive intervention and skill remediation of identified weaknesses and/or delays. Skill deficit issues are better addressed at this time then adulthood when skill training and intervention efforts have minimal effect. Clearly, early intervention provides the greatest window of opportunity for academic recovery and success. Moreover, helping students understand their unique learning issues and responsive adaptive strategies allows them to gain valuable insight into their own learning process at that time, and throughout their educational career.

Although instructional modifications and accommodations may be useful in the classroom setting, caution is noted because these modifications may lead to unrealistic views of learner's abilities and performances. Shorter, easier assignments that sacrifice skill development and enhancement do nothing for students except create false hopes and expectancies. The world of work will not seek out nor long accept workers who have weak processing skills and cannot work collaboratively with their coworkers. Therefore, the highest levels of skill development should be sought out for all identified students and even periodic failure experienced in order to help create a more realistic perception of themselves and their world. Teaching them how to handle failure as well as effective ways to avoid it in the future could be one of the most important lessons they will learn in school.

As identified students advance through elementary school, interpersonal life skills need to be developed and refined. It is essential that we teach children to get along with each other, to listen to each other, and to possess a mutual respect for each other. For example, cooperation, individual and group effort, listening, and general problem solving are all important and essential, and these must be cultivated in combination with their specific academic skills and competencies. Career education should be provided so that all students become exposed to various careers in the community. In addition, parental input into their child's long-term educational outcomes is vital from the onset of services. Transition effectiveness is enhanced when parents serve as active team members.

At the middle school, a career orientation focus should exist. Career inventories should be completed along with individual career profile matches. An analysis can be completed of personal characteristics consistent with particular jobs and careers and based on personal style and trait/temperament issues. Professional contacts with various community workers should be encouraged. E-mail contacts, in addition to job fairs, classroom presentations, and job shadowing, can provide relatively easy connection with professionals in the field.

Continued emphasis on academic and functional life skills should be maintained throughout the middle school experience, especially since students with disabilities are at high risk for dropping out of school. Personal counseling can be critical at this time since students may begin to question their abilities, the utility of school, or their seemingly impossible educational dreams. Psychological support through the school system is vital for both the student and the student's family. This support on some level will likely be needed throughout the student's school career. At this time each identified student should be encouraged to be an active participant in his or her educational plans and intended outcomes of the ITP that should exist as part of the IEP. Discussion of both post-secondary education and potential employment options should occur at this time. A completed vocational assessment should provide valuable information for that discussion. Each student, along with the parents, should have complete knowledge and awareness of those findings so that critical and informed decisions can be made and acted upon with the remaining high school years.

It is a federal requirement that every identified student upon entering high school have an established and functional transition plan in place by age 16 or earlier if necessary. In the model case the transition plan was in place well before high school, which should be the norm and not the exception. Representation on the student's team should broaden at this time to include essential outside agency members (e.g., vocational rehabilitation counselors, social service and/or community college representatives). This must occur in order for a smooth transition of services and support to occur after graduation. For example, since the schools relinquish responsibility and financial obligation upon graduation, the vocational rehabilitation counselor will be instrumental in helping shift institutional responsibility and providing continuing services to any qualified student. The transition plan must stipulate, through clear goals and objectives, anticipated post-secondary outcomes (e.g., work and/or college classes), necessary vocational training, and adult living plans.

One of the critical components in successful transition programs is the work experience component. Half-year to full-year paid work programs, typically during the senior year, have proved to be effective in increasing the likelihood of sustained employment after graduation. Apprenticeship programs should be contacted and thoroughly reviewed by this time.

For students who plan on attending post-secondary institutions, it is paramount that identified students visit their selected institutions early (before the senior year) and contact the appropriate university offices before they enroll in order to receive entitled academic services. Students must provide appropriate documentation of their disability status, typically a full and current (within a year of enrollment) psychoeducational assessment along with a qualification of disability, in order to receive appropriate classroom accommodations and support services outside the classroom. In addition, knowledge of basic civil rights, the ADA, and general procedural safeguards will be needed because students must serve as their own advocate. Gerber (1997, p. 4) has noted, "In order for a person who is learning disabled to navigate in the workplace, self-direction as well as self-advocacy is a must." To formally address this, an education training component on the ADA connected to the IEP can and should be started at the secondary level and carried over into the post-secondary level for those students who continue their formal education.

The school system does not typically take on the "educational responsibility" of informing employers about various disabilities and the special education law that is designed to protect employees in the workplace. And despite greater public awareness and acceptance of disabilities, employers are still not well educated to the needs and legal safeguards of individuals with disabilities. Therefore, work transition plans at the high school level should include information packets for employers and businesses. In addition, personal visits and education seminars can help to increase awareness in these areas.

Owing to the increased opportunities in social engagement whether on the job or outside the work place, the highest levels of social conduct and interpersonal control will be needed. Dealing with daily issues involving stress, anger, self-esteem, etc., are important for everyone and that includes individuals with disabilities. Seeking out and receiving professional assistance especially during periods of work or life adjustment will be necessary for adults with special needs. This kind of training can be initiated in the classroom curriculum and maintained through a continuing education program beyond high school.

Continued learning assistance with basic skills (e.g., reading, mathematics) beyond high school for adults, whether college bound or not, will likely be needed. As was mentioned previously, proficiency in many academic skills will continue to lag and consequently require continued instruction and support services. Adult service programs or flexible "additional year" programs at the secondary level may be used to help address this need. Vocational training programs that have reentry options are needed for adults who seek additional job skills/preparation or advancement. A life-long learning perspective must be held and maintained by both those served as well as the service providers.

Model Programs

The Marriott Foundation's "Bridges... From School to Work" program is a community-based vocational internship work program for students with disabilities (Donovan & Tilson, 1998). Across six cities around the nation a standardized vocational experience, including a 2–5 month competitive paid internship, is provided to seniors possessing a wide range of disabilities (e.g., LD, mental retardation, emotional /behavioral disabilities, sensory disabilities). More than 3,000 students have participated in this program, and a majority of students (86%) have completed their internships and have obtained gainful employment (Donovan & Tilson, 1998). This highly successful program generated four essential principles that must be acknowledged in order to create successful employment outcomes. When setting up an effective transition program, Donovan and Tilson (1998, p. 19–21) list the following: "Competitive, paid work experience plays a significant role in post-school vocational outcomes, lasting relationships grow from complementary needs and capabilities, first-hand experience is vital to building real understanding and commitment, and under promise and over deliver."

The Pathways to Satisfaction (PTS) Model developed by Thomas Holub is utilized in more than 30 school districts throughout the midwest. This program is a student and parent focused program primarily provided through regular education instruction. Individualized plans are initiated during the middle school years with a transition specialist, followed by a comprehensive vocational assessment and career exploration, actual work experience, and appropriate transition experiences, and continued through the post-high school period with follow-up services and evaluation.

Beyond the Classroom

Once a student with a disability leaves the school setting and enters the world of work the need for services and support does not end. In fact, it grows as job-related skill enhancement is required and/or new life adjustment issues are faced. The adult with special needs faces old and new challenges. Brown (1997) contends that the economy in the twenty-first century will require new work and technology skills for all workers including those with disabilities. In particular, employees today must work faster and more often be a part of a team. Also, employees are more empowered to make decisions on their own and may or may not work directly in the office. In addition, young workers must be flexible in learning new systems, approaches, software packages, etc., in the workplace. Students with disabilities must be given opportunities to develop these work skills and habits as well as prepare for the entire job search process.

Moreover, adults with disabilities must become fully informed about their constitutional rights and protections under the ADA. This is critical because current research indicates that adults with LD perceive themselves as having minimal knowledge and understanding of their constitutional rights and safeguards (Witte, in press). Brown (1997, p. 34) has stated that, "Individuals must continuously work to understand and improve themselves." This critical message is for all individuals with disabilities, and it must be followed if meaningful employment is to be found and retained.

Gerber, Ginsberg, and Reiff (1992) examined the successful employment patterns of adults with LD. One essential theme was found for these individuals: the ability to take control and charge of one's life and to effectively adapt to one's environment. The control involved both an internal (e.g., general desire to succeed, setting goals, positive spin on their learning and/or personality style) and external focus (e.g., coping mechanism, a goodness of fit between an individual's abilities and their immediate environment). Clearly, the integration of internal processes and skills matched to an existing and compatible system (e.g., the workplace) can create a best "fit" for adults with LD (Szymanski & Hershenson, 1998).

Also, many of the highly successful adults with LD had personal mentors within their support groups. Based on the interview findings, a process model for vocational success that can be embedded within existing curricula was developed. Gerber et al. (1992, p. 484–485) note that "success begins with a set of internal decisions; then, highly successful adults with LD pursue several ways of adapting themselves to their disability and the world around them. Successful adapting strengthens the desire, produces more goal setting, and helps people through the maze of reframing. And, with strong adapting high levels of control are attainable."

Several essential aspects and components that increase the effectiveness of transition plans have emerged from the current literature. The following is a listing of core elements that a district should consider before developing a transition program.

Key Aspects of Effective Transition Plans

1. Determine the standards (e.g., proficiencies, skill levels, etc.) that special needs graduates will be evaluated against; the "end product" must be known in order for effective planning to occur.

2. Clear organization, from the elementary to the high school levels, along with strong administrative ownership and follow-through are essential for effective transition services.

3. A long-term planning focus complete with periodic progress monitoring is needed; provide services early and consistently throughout the student's educational career.

4. Every identified child must have an individualized transition plan based on their unique needs, issues, and goals.

5. Parents, as well as the identified student, need to be actively involved in the transition planning process as early as possible.

6. The ITP should exist as an inseparable part of the IEP and be reviewed and/or evaluated at least once a year.

7. Focus on multiple domains (e.g., academic skills, functional life skills, interpersonal skills) in the IEP throughout the student's educational career.

8. Career and vocational education and training should start during the middle school period and extend throughout the high school period. Paid work programs and experiences during the junior and/or senior years should be pursued by school districts.

9. A seamless transition of support from high school to adult services must occur. A vocational rehabilitation representative should be a member of the transition team by the time the identified student enters high school. Interagency collaboration is critical for effective transition performance and that coordination should start well before the student exits the educational system. A life–span model must be held as individual needs for services, continuing education, trainings, etc., will emerge as these youth participate more fully in work and society.

10. Every student must be educated regarding his or her rights, protections, and procedural safeguards guaranteed under the ADA.

Roles for School Psychologists

The following suggested roles and responsibilities may or may not fit into the "expected" school psychology position. In the past, school psychologists have had minimal participation and impact in vocational planning and training for students with disabilities (Levinson, 1990). However, as Levinson (1995) has noted, the school psychologist's expertise in human development, applied behavior analysis, learning theory, and assessment (e.g., daily living skills, vocational interest) makes that professional an extremely valuable resource for transition planning. The following roles are essential to effective transition service and match up well with the formal training and expertise of most school psychologists:

1. Serve as a "quality control" coordinator ensuring that the maximum intervention effect is being provided throughout the educational career of the identified student. However, this responsibil-

ity and position should be separate from the case manager position that exists with most identified student teams.

2. Educate team members to the varying learning and human development needs/issues of the identified student as the student transitions (e.g., elementary, middle, high school, vocational, college, work) through the educational life stream. An emphasis on long-term life adjustment and functional work competencies should be maintained.

3. Serve as a school transition specialist (as a possible member of the ITP team) for students leaving the secondary system and entering vocational, college, or direct work settings. Part of this role should be to make sure each student has the proper paperwork and/or documentation completed for the next phase in the transition process. For example, if the student is going off to college and has an identified disability, then a current psychoeducational evaluation will be necessary in order for that student to receive university services and/or accommodations.

4. Provide through formal and informal assessment measures (e.g., aptitude, academic, interpersonal, social) a current student profile that can be directly integrated into the ITP.

5. Serve as a designated business consultant informing and educating employers to various disabilities, characteristics, appropriate accommodations, special education law, civil rights protections, etc.

6. Help design and evaluate the effectiveness of transition program procedures and pre-employment services.

7. Provide periodic inservice and continuing education programs for adults with LD and their service providers.

8. Serve as a professional mentor and consultant for adults in transition.

9. Parents of identified students need to be welcomed and valued by the educational team. The school psychologist is in a prime position to facilitate parental involvement in the transition process.

10. If needed, the school psychologist can provide mental health counseling as part of psychological support services in the transition plan.

11. Teach classes and provide lectures in high school and/or collect resources (e.g., websites) for individuals with disabilities about the ADA and their constitutional rights and protections.

12. Since self-control/adaptation is an identified success ingredient for adults with LD, direct instruction and consultation in personal management techniques to transition students seems warranted and could be provided by the school psychologist.

SUMMARY

Transition can be defined as the passing or moving from one point to another with an eye toward the future. And that future must provide for students with disabilities the opportunity to fully participate in the adult world. Much more work is still required in order for that reality to exist. If a collective "transition picture" can be drawn of youth and adults with disabilities, then it would likely include the following:

1. Skill deficits may remain: Address them with a life-long perspective and plan.

2. Lack of specialized training and/or continued education may limit future employment opportunities: Keep doors open to effective and flexible programs and options for students and adults.

3. Gender and minority status further limit employment opportunities: They are the most at-risk clientele and must not be forgotten.

4. Adults with disabilities, particularly those with LD, may hide their disability, lack true understanding of their rights and protections, and when employed may experience minimal job satisfaction including those who have graduated from college (Witte, Philips, & Kakela 1998): Educate them to the long-term benefits of self-advocacy because they must continue to educate, inform, and influ-

ence the general population about the life-span issues that confront individuals with disabilities.

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This book provides the reader with a better understanding of important pre-employment knowledge, experiences, and practices for adults with learning disabilities. In addition, workplace issues (e.g., job accommodations, technology, ADA issues) are discussed.

Phelps, L. A., & Hanley-Maxwell, C. (1997). School-to-work transitions for youth with disabilities: A review of outcomes and practices. *Review of Educational Research, 67*, 197–226.
This research article provides a comprehensive review of current school-to-work transition outcomes and data-generated practices for youth with disabilities.

Wehman, P. (1996). Life beyond the classroom: *Transition strategies for young people with disabilities.* Baltimore, MD: Brookes.

This text provides a comprehensive overview of transition services for students with disabilities as well as the total transition process. Direct programming applications are provided for youth with various disabilities. A great reference text filled with many practical applications.

WEBSITES

National Transition Alliance Home Page,
http://www.dssc.org/nta/html/home.htm.

Parents and the School-to-Work Transition of Special Needs Youth,
http://www.kidsource.com/kidsource/content4/special.needs.trans.html.

Transition Services in the IEP,
http://www.ldonline.org/ld_indepth/iep/ieppub.html.

Transition Plans Guide to the Future,
http://www.sna.com/switp/tgp.htm.

Work Incentives Transition Network-Home Page,
http://www.vcu.edu/rrtcweb/witn/ssi.htm.

Transition Planning Parent Brief,
http://ici2.umn.edu/ntn/pub/briefs/tplanning.html.

101 Best Practices in Transition Planning for College-Bound Students With Disabilities

Susan M. Vess
The University of Iowa

OVERVIEW

National focus on employment outcomes for all students originated in the 1980s, intensified in the 1990s, and led to legislation promoting school-to-work initiatives (Minskoff, 1996). As an outgrowth of efforts to improve academic and job-related skills for all students, transition planning for students with disabilities (SWD) was included in the Individuals with Disabilities Education Act (IDEA) to enhance those skills in young adults who participated in special education during their school years. The history of school-to-work initiatives for all students, transition planning for SWD, and the dismal educational and employment outcomes of SWD were reviewed by Defur and Reiff (1994) and Minskoff (1996).

Although few SWD include college in their high school transition plans, a growing number have enrolled in college since the early 1970s (Hameister, 1989; Heath Resource Center, 1995; Minskoff, 1996; Rapp, 1997). The college aspirations of SWD, especially those with learning disabilities (LD), are fueled by (a) federal legislation, including Section 504 of the Rehabilitation Act (Section 504), the Americans with Disabilities Act (ADA), and the IDEA (Brinckerhoff, Shaw, & McGuire, 1993; Horn & Bobbitt, 1999); (b) change in the orientation of special education away from remediation and tutoring to instruction in study skills, problem solving, and other learning strategies (Brinckerhoff, Shaw, & McGuire, 1993; Minskoff, 1996); (c) renewed emphasis on educating children with disabilities within the general curriculum and with a focus on post-graduation outcomes (Brinckerhoff et al., 1993; Minskoff, 1996); (d) emphasis on personal skills such as self-advocacy, personal independence, and self-determination needed for both postsecondary education and employment (Defur & Reiff, 1994; McGuire, 1997; Minskoff, 1996); (e) mandated transition planning for successful movement into adulthood and meaningful employment (Brinckerhoff et al., 1993; Defur & Reiff, 1994; Minskoff, 1996; Vogel & Reder, 1998b); (f) improved technology including advances in computer hardware, software, and assistive technology (Brinckerhoff et al., 1993); (g) increased sophistication of the workplace and demands for high academic standards (McGuire, 1997; Minskoff, 1994, 1996); and (h) expanding societal expectations and changing demographic characteristics of college students (Brinckerhoff et al, 1993; Habley, 1995; Synatschk, 1995; Vogel & Reder, 1998a, b).

Compared to special education students not seeking postsecondary education, SWD attending college show mild disabilities and good academic skills (Horn & Bobbitt, 1999; Minskoff, 1994, 1996). Now, about half of postsecondary SWD report LD which is a significant increase in these students numerically and proportionally in the past decade (Henderson, 1999; McGuire, 1998; Minskoff, 1994; Scott, 1997a). LD continues as the largest group of SWD in postsecondary education with rapid increases in students with other *hidden disabilities* (ADHD and chronic health or psychological disorders). In contrast, there are proportionally fewer students with orthopedic disabilities and visual impairments served by campus disability offices (Henderson, 1999; Heyward, 1998).

Despite the importance of transition planning as a means of successfully moving SWD to post-graduation activities, these efforts are not as effective as postsecondary matriculation and graduation rates might suggest. College students with LD demonstrate poor academic skills relative to other college students (Vogel & Reder, 1998b). About one-third of SWD remain in college until a baccalaureate degree is earned compared to 48% of non-disabled students who graduate (Henderson, 1999; Horn & Bobbitt, 1999). However, SWD who do graduate from college are comparable to non-disabled graduates in salaries, employment in areas related to their majors, and matriculation into graduate school (Henderson, 1999; Horn & Bobbitt, 1999).

While movement from secondary to postsecondary education is not a seamless process for any student, this intermediate link between high school and work is fraught with difficulties for SWD. First, although the conceptualization of transition planning expanded to include preparation for postsecondary education, transition efforts often focus on the needs of students moving directly into employment after high school (Defur & Reiff, 1994). Second, high school SWD achieve short-term academic objectives found on IEPs with little regard for the rigors and requirements of postsecondary options (Defur & Reiff, 1994; Rapp, 1997). Finally, secondary students with mild disabilities are believed to move easily into higher education so may receive less attention than other SWD attending high school (Defur & Reiff, 1994; Minskoff, 1994).

BASIC CONSIDERATIONS

Developmental, student, institutional, and legal variables contribute to the challenges SWD face in college. Hameister (1989) reported that all first-year college students, including SWD, experienced developmental crises, such as intellectual and academic competence, establishing and maintaining interpersonal ties, and career choices that match interests, skills, abilities, aspirations, and attitudes. Alternatively, Upcraft and Gardner (1989) identified the following factors associated with successful adjustment to college by first-year students: (a) intelligence and history of academic success; (b) personal attributes such as motivation, emotional stability, and values consistent with those of the institution; and (c) parental support and lack of either family or nonacademic problems such as childcare, money, and disputes about major area of study, career choices, grades, and the personal behavior of students at school. SWD often fall short of these developmental milestones and success indicators because of the mismatch between expected effort and academic demands, reluctance to use support services such as the student disability office, and limited self-awareness.

Independence and self-determination are major developmental issues for college students. For example, students must resist the urge to overuse out-of-class time for socializing instead of studying or to sleep late rather than attend class. For many first-year SWD, independence takes the form of ignoring the presence of a disability that produces a negative impact on learning and/or behavior (Defur & Reiff, 1994).

Like all college freshmen, SWD must not only develop age-appropriate independence, but also learn to function separately from parents and special education case managers who advocated for and often protected them from academic and interpersonal problems in high school (Defur & Reiff, 1994; Minskoff, 1996). Not only do they face the usual hazards of campus life such as disputes with other students, issues related to time and money management, and talking to professors about academic problems, SWD must also disclose their disability to the appropriate institutional officer, request accommodations, and find assistance on campus for resolving non-disability–related academic concerns. SWD using a personal care attendant hire, supervise, and potentially fire that individual. Yet, many SWD have limited experience in independent functioning, self-awareness, and self-advocacy required for these efforts (Defur & Reiff, 1994; Minskoff, 1996; Scott, 1997a).

Students With Disabilities

During the 1995–1996 school year, approximately 6% of undergraduates reported the presence of a disability, and approximately one-third of SWD in this survey identified LD as their disability (Horn & Bobbitt, 1999). In a 1998 survey of first-year, full-time freshmen enrolled in higher education, over 154,000 students or approximately 9% reported at least one disability (Henderson, 1999). This represents more than a 300% growth in the number of freshmen reporting a disability since 1978 (Henderson, 1999).

By using an index composed of (a) grades (GPA of 2.7 or higher in academic classes); (b) class rank at or above the 54th percentile; (c) National Education Longitudinal Study (NELS) composite scores at or above the 56th percentile on the 1992 NELS mathematics and reading aptitude test; and (d) a composite ACT of at least 19 or combined SAT scores above 820, SWD were less likely to be *minimally qualified* for postsecondary education than their non-disabled peers. Students with and without disabilities in the top 10–25% of entering freshmen on the index (*highly qualified for admission*) enrolled in four-year institutions at similar rates. When comparing students who were *moderately qualified* (50–75%), SWD more often enrolled in two-year institutions (Horn & Bobbitt, 1999).

In 1998, college freshmen with disabilities more often aspired to an associate or vocational degree and attended a two-year institution than first-year students without disabilities. The major exception to this was attendance at a four-year private college (Henderson, 1999; Horn & Bobbitt, 1999). Students with LD are the largest disability population attending community colleges (Rapp, 1997).

Despite the intention of transferring to a four-year school after graduating with an associate degree, most students graduating from a two-year college do not enroll in a four-year institution. Consequently, few students who aspire to a baccalaureate degree actually earn one (Horn & Bobbitt, 1999).

Community colleges and other two-year institutions offer certificates in vocational or technical areas or terminal associate degrees, either of which is appropriate for employment requiring education beyond high school, but not a college degree (Rapp, 1997). They have modest or open admissions requirements, coursework that ranges from remedial or developmental to college level, and an employment orientation including pre-service opportunities, career exploration and development, and job search strategies (Rapp, 1997). They offer a range of services for SWD (Minskoff, 1994; Rapp, 1997).

Special educators often believe that community colleges offer vocational training with less academic coursework (Rapp, 1997). Further, they consider this option desirable for SWD who are described as good hands-on learners but have poor academic skills. However, there are three important considerations: (a) matriculation into most programs, even those that are technical, require high school coursework in math, sciences, and other areas; (b) students with limited academic skills may find the academic portions of training beyond their abilities; and (c) a vocational focus combined with limited academic skill and knowledge development may consign SWD to entry-level employment and reduce their opportunity for advancement to supervisory positions, business management, or business ownership (Minskoff, 1996).

When comparing first-year SWD to other freshmen on demographic variables, SWD are more likely to be male, older, and white, non-Hispanic (Henderson, 1999; Horn & Bobbitt, 1999). Both groups show comparable parental levels of education and employment. However, SWD come from families with slightly lower income levels. The above characteristics of SWD are associated with problems in persistence to degree attainment for all students (Horn & Bobbitt, 1999).

Although students with and without disabilities attend postsecondary education to obtain a good job or earn more money, SWD also reported that they enrolled to prove to others they can succeed in college and to improve reading and study skills (Habley, 1995; Henderson, 1999). Additionally, they attend college because of the encouragement of a mentor or role model. Students with and without disabilities indicate preference for the same majors, especially business (Henderson, 1999; Horn & Bobbitt, 1999).

When compared to college-bound secondary students without disabilities, college-bound SWD demonstrate less academic preparation. Although secondary students with and without disabilities averaged four hours weekly on homework, SWD were less likely to study with friends and meet or exceed recommended secondary classes in math, foreign language, and science (Henderson, 1999). They enrolled in remedial math and English classes more often; were equally likely to complete requirements in American history, government, and arts/music; and took advanced placement (AP) courses less often (Henderson, 1999; Horn & Bobbitt, 1999). SWD also achieved lower secondary GPAs, especially a C or D average, and earned lower average scores on college placement exams such as the SAT or ACT (Horn

& Bobbitt, 1999). Finally, when compared to other first-year SWD, freshmen with LD were less likely to complete two years of foreign language in high school and often expressed interest in special programs for SWD at the collegiate level (Horn & Bobbitt, 1999).

According to Habley (1995), first-year college students often inflate degree aspirations, personal characteristics, and academic skills and abilities and underestimate the likelihood of failing a course, changing majors, transferring to another school, leaving college, and seeking personal and career counseling, tutoring, and other services. The majority of first-year students leaves college or stops taking classes for an extended period rather than earn either an associate or baccalaureate degree (Tinto, 1993).

Despite first-year college students' tendency to overestimate abilities, SWD ranked themselves lower on math ability, intellectual self-confidence, academic ability, and writing ability than their non-disabled peers (Henderson, 1999). Minskoff (1994, 1996) attributed problems in academic competency and poor self-esteem to special education modifications in class work and testing that gave SWD an unrealistic, inaccurate appraisal of their skills relative to those of their high school classmates.

Postsecondary Education

Students enhance their potential for success in college by choosing an institution that fits their personal needs and preferences for size, location, curriculum and program options, selectivity, academic rigor, mission, and cost (Heath Resource Center, 1995, 1997; Tinto, 1993; Upcraft & Gardner, 1989). They are further assisted if they understand the culture, structure, requirements, and vocabulary of higher education both generally and specific to the institution they attend (Heath Resource Center, 1995). Success in higher education also depends on a variety of practical skills and attitudes, including (a) reading the college catalog for general information such as course descriptions and campus services and for policies and procedures such as grading and graduation requirements, (b) understanding core academic requirements and those of the major field of study, (c) calculating the GPA and using this information in decision making, (d) determining course sequences over several terms, (e) scheduling semester course loads to balance academic demands and instructor teaching style and expectations with personal interests and skill levels, and (f) knowing and complying with institutional policies, procedures, and requirements for selection of a major area of study, class registration, withdrawal from courses, academic probation and dismissal, graduation, and academic integrity and conduct (Heath Resource Center, 1995).

According to Tinto (1993), persistence until graduation is strongly predicted by academic preparation and aspirations. Students also increase their likelihood of graduating if they transfer prior commitments to high school teachers and friends to new ties at college (Tinto, 1993). For SWD who depended on their parents and former teachers during high school, forming new relationships with postsecondary faculty and service providers and relying on their own skills and initiatives are major hurdles.

Persistence to degree attainment is also enhanced when students can express clear, realistic academic, personal, and career goals (Heath Resource Center, 1995; Tinto, 1993). At all levels of postsecondary education, persistence and retention are tied to motivation to expend personal energy and resources to achieve academic and personal goals (Tinto, 1993). Although ability and academic achievement are directly related to admission and success in higher education, the personal characteristics of students, especially motivation and perseverance, are more important to college retention until degree completion (Heath Resource Center, 1995; Minskoff, 1994; Tinto, 1993). Nevertheless, a strong work ethic does not compensate for inadequate academic skills.

When SWD's low educational aspirations, confidence, and self-esteem are coupled with their limited academic preparation and demographic characteristics, remaining in college until degree attainment is often a problem. SWD are less likely to possess the academic credentials to gain admittance, enroll in courses bearing academic credit needed for graduation, or compete on an equal academic footing with non-disabled classmates (Horn & Bobbitt, 1999). They may have attitudinal, experiential, behavioral, and maturational issues that further delay or deter them from achieving a successful postsecondary outcome. In virtually every respect then, SWD are at a competitive disadvantage when compared to non-disabled students in postsecondary education.

Legal Considerations

Upon high school graduation, SWD transition to a new legal and eligibility status under the ADA and Section 504 (Heath Resource Center, 1997; Heyward, 1998). The ADA and Section 504 protect SWD who are qualified for the activity they are pursuing and meet the legal definition of disability (Heath Resource Center, 1997). At the postsecondary level, these two laws impose obligations and limitations on SWD seeking accommodations.

Although the protections of these laws overlap in postsecondary education, the ADA is often considered more applicable in employment contexts (Minskoff, 1996), and Section 504 historically and currently has greater impact on postsecondary education (McGuire, 1998). These civil rights statutes require equal access and participation of qualified SWD without reduction or modification of standards or provision of special programs for SWD (Gordon & Keiser, 1998; Heath Resource Center, 1995; Heyward, 1998; McGuire, 1997, 1998; Scott, 1994, 1997b). Additionally, neither law requires postsecondary accommodations that are indirectly related to participation and meeting course requirements, even though SWD received a host of interventions in secondary education (Heath Resource Center, 1997; Scott, 1994, 1997a; Wells & Hanebrink, 1997).

SWD who meet essential requirements, with or without accommodations, are described as *otherwise qualified*. If SWD are otherwise qualified, then the ADA and Section 504 guarantee access and participation in all college programs and activities (Heath Resource Center, 1995; Heyward, 1998; Scott, 1997b). SWD must meet all standards required for admissions, retention, and graduation to maintain qualified status (Heyward, 1998; Scott, 1997a, b; Wells & Hanebrink, 1997). Scott (1994) stated that qualified status is determined through review of (a) student characteristics such as disability and its functional impact, (b) essential requirements of the institution or program of study, and (c) whether reasonable accommodations would enable SWD to meet essential requirements.

The application of the ADA and Section 504 requires balancing the rights of SWD to participate and the rights of institutions to maintain academic integrity (Heyward, 1998; McGuire, 1998; Wells & Hanebrink, 1997). Institutions are not required to change essential and technical standards if they are legitimate and reasoned, rationally related to the goals and requirements of the program or institution, and are not applied in a discriminatory manner (Heyward, 1998). Essential and technical requirements usually evolve from professional and accreditation standards, are enjoined on all students, and ensure students with and without disabilities have the knowledge, attitudes, skills, and other prerequisites to participate in a program and its activities (Heyward, 1998; McGuire, 1998; Scott, 1994, 1997a).

In postsecondary institutions, *essential functions* include course work and participation in laboratory and other experiences necessary to acquire the knowledge and skills required to work in a particular field and obtain professional licensure (Heyward, 1998; Scott, 1997b). *Technical standards* are non-academic requirements such as attendance, personal and professional behavior, prior education and experience, physical strength and dexterity, use of appropriate grammar and vocabulary, and compliance with professional practices, standards, and ethics (Scott, 1997b). If SWD meet both essential and technical standards and do not pose an immediate threat to health or safety, it is illegal to deny admissions or participation in a program on the basis of speculations about their disability, limitations, or employability (Heyward, 1998; Scott, 1994, 1997a, b).

The ADA and Section 504 emphasize the similarity of students with and without disabilities in postsecondary education (Heath Resource Center, 1997; Heyward, 1998; McGuire, 1998). Because they are nondiscrimination statutes, they mandate services required for access and equal participation of SWD. Except for accommodating access needs, these laws expect SWD to learn independently, complete the same requirements, and comply with expectations for acceptable academic performance and conduct.

The ADA and Section 504 require SWD to succeed or fail on the merits of their performance. They do not rescue SWD, on the basis of disability, from onerous course or institutional requirements and sanctions and do not require an emergency effort to provide accommodations or to relieve SWD from academic jeopardy due to limited academic skills or low grades, poor attendance, and inadequate test performance. Thus, SWD who argue that they would have met standards but for their disability are not admitted, retained, or graduated.

In all academic decisions from matriculation to graduation, SWD are held to the same policies and procedures as non-disabled students and are rarely given preferential treatment such as tuition refunds, changes in course meeting times, or relief from penalties given for academic integrity or conduct violations. They are unsuccessful when they claim cheating was due to the impulsivity of ADHD or plagiarism was due to LD. SWD are subject to regular disciplinary proceedings rather than manifestation reviews.

Any student may be qualified for admissions, but then flounder and find themselves on academic probation or dismissed for lack of reasonable academic progress. GPA requirements are not waived to admit SWD to a particular major and a minimum grade in a prerequisite class is not ignored so that SWD can move to the next-level course. SWD are usually unsuccessful in appealing academic decisions when they claim that the disability was responsible for their academic difficulties. Any student may be denied graduation because they have not met general or major requirements for graduation or have not earned the necessary GPA. SWD cannot successfully demand waiver of foreign language, math, or other course or graduation requirements even if lack of that element delays degree completion.

According to the ADA and Section 504, a student with a *disability* has a physical or mental condition that *substantially* limits a *major life activity* such as learning, thinking, or concentrating, has a history of a condition, or is regarded as having a condition (Kincaid, 2000). SWD who are currently and significantly impaired are eligible for accommodations; students who fit the *history of* or *regarded as* portions of the definition are protected from discrimination but are not accommodated (Kincaid, 2000).

Unlike the IDEA, the ADA and Section 504 do not specify particular mental or physical conditions as qualifying SWD for their protections. Rather, determination of disability rests on both the *presence* and *severity* of the condition (Gordon & Keiser, 1998; Kincaid, 2000). Significant severity means an inability or considerable difficulty in engaging in one or more major life activities in comparison to the *average* person.

Some activities may be severely limited, but do not fall within the parameters of a basic life activity. Several examples help clarify this distinction: (a) There may be a significant limitation in reading, but a significant limitation in biology is too specific to be a life activity and test anxiety is too broad; (b) there may be a significant limitation affecting a class of jobs, but SWD are not assured the right to major in a particular area such as medicine; and (c) there may be a significant limitation in one or more areas within a unique, superior overall profile (gifted LD) or in comparison to an above-average cohort such as other postsecondary students, but SWD are compared to the *average* person in the general population (Gordon & Keiser, 1998; Kincaid, 2000).

The ADA and Section 504 require an individualized inquiry to determine if a student meets the criteria of the definition, especially the severity of impact and functional limitations (Heyward, 1998). The manifestations and severity of a condition vary by time and circumstances; therefore, these laws require an evaluation of its current, functional limitations under various circumstances (Gordon & Keiser, 1998).

Scott (1994) indicated that eligibility for accommodations was based on four factors: (a) disability, (b) adequate documentation, (c) qualified status, and (d) reasonable modifications. At the postsecondary level, SWD must disclose their disability to the appropriate institutional officer and request accommodations (Heath Resource Center, 1995, 1997; Heyward, 1998; Scott, 1997b).

In response, the institution has the right to request documentation of the disability and adequate time to review it (Heyward, 1998). If requested documentation is incomplete or not sufficiently current to identify accommodations, the institution requires SWD to seek evaluation at personal expense (Heyward, 1998; McGuire, 1998; Scott, 1994, 1997b). The institution determines what accommodations are necessary in view of academic demands and manifestations of the disability (Heath Resource Center, 1995; Heyward, 1998; Wells & Hanebrink, 1997). Accommodations provide access and participation to a particular student, but are not necessarily those recommended by the diagnostician or preferred by that student (Scott, 1994).

Under the ADA and Section 504, *accommodations* are designed to permit access and meaningful participation by removal of architectural and other barriers to learning (Heath Resource Center, 1997; Heyward, 1998). Usually, they involve alterations in how information is communicated in the classroom and how learning is demonstrated on tests (Scott, 1997a).

Only students whose disabilities present a current, severe functional limitation are provided with accommodations (Heyward, 1998). When they argue that their history of disability as demonstrated by their special education record entitles them to accommodations, many SWD are surprised to find that their IEPs, dated psychological reports, or receipt of special education services are insufficient to demonstrate a current, severe functional limitation and trigger accommodations under the ADA and Section 504.

Accommodations are described as *outcome neutral* because they are designed to provide access rather than a specific grade or competency (Gordon & Keiser, 1998; Scott, 1997a, b). Indeed, outcome is not the measure of the effectiveness of an accommodation in postsecondary education (Heath Resource Center, 1995; Scott, 1997b).

SWD facing difficult academic demands or sanctions and expecting immediate relief are frustrated. However, in college, SWD are not guaranteed academic success and accommodations are not retroactive (Well & Hanebrink, 1997).

Effective accommodations are timely and meaningful in view of the manifestations of the disability in a specific context and permit SWD to participate equally with classmates (Heath Resource Center, 1995). There is scrupulous care not to apply accommodations that provide an unfair advantage over classmates. SWD are expected to monitor the effectiveness of accommodations and to notify the appropriate college representative if accommodations are not effective in providing access (Scott, 1997b).

For qualified SWD, accommodations are forged on the basis of an individualized inquiry about the specific functional limitations posed by the disability and the academic and access demands of a particular situation (Heyward, 1998; McGuire, 1998; Scott, 1997a, b; Wells & Hanebrink, 1997). To identify the need for accommodations for particular courses, disability advisors and SWD determine whether the manifestations of the disability in specific situations are sufficiently severe to warrant modifications. Because of the individualized nature of the inquiry, SWD may not necessarily receive accommodations for every course. Moreover, they must conform to all policies and procedures for obtaining accommodations and use them appropriately (Scott, 1997b). For example, those SWD who do not attend class because they receive the accommodation of a note taker do not lose the note taker, but will receive any penalties for nonattendance.

SWD expecting services which assure success in postsecondary education receive accommodations that permit access and foster development of independence, a major developmental goal for all college students. They do not receive personal services or devices such as tutoring, remedial classes, in-class supervisors or coaches, readers for personal use or study, computers or software, assistance with homework and projects such as word processing, care attendants, and reminders to take medicine, attend class, or turn in assignments. SWD do not receive assistance such as case managers, modifications of class work, or different grading standards that they enjoyed in high school (Scott, 1997a; Minskoff, 1996). If SWD require more extensive or intensive services at the postsecondary level, then SWD should seek out a special college for SWD or attend an institution with a for-fee special program for SWD.

BEST PRACTICES

Transitioning is a life-long process rather than an event with clearly demarcated boundaries. Thus, the transition from secondary education to postsecondary education must be based on progressive, planned strategies that began early in SWD's school careers. Minskoff (1994), for example, believes transition planning begins with special education and related services in elementary and secondary school and continues through postsecondary education and vocational training. Specifically, academic preparation and development of social and life skills, self-awareness and self-advocacy, and career knowledge and behaviors are key components of both transition efforts and successful postsecondary and employment outcomes for SWD.

In effect, postsecondary education becomes the period during which adolescents further develop skills, knowledge, and personal attributes leading to a satisfying quality of life, equal opportunity and treatment, and meaningful employment in adulthood. When combining this school-to-work orientation with postsecondary education, three themes in transition planning for college-bound SWD emerge: (a) assets and barriers facing students and adults with disabilities, (b) career planning, and (c) practical considerations.

Assets and Barriers Facing Students and Adults With Disabilities

According to Synatschk (1995) and Heath Resource Center (1995), postsecondary success for SWD, especially those with LD, is associated with high frustration tolerance, average to above average ability, perseverance despite periodic setbacks, and recognition of the need to study more and even take a longer time to earn their degrees than is required of students without disabilities. Preliminary findings about the academic success of students with LD or ADHD in college emphasize factors associated with an active learning style, including motivation, organization, high cognitive abilities, and use of multiple resources (Minskoff, Minskoff, Allsopp, & Hedrick, 2000).

Success in adults with disabilities is related to *self-control* and *self-determination*, including setting attainable goals consciously (*internal decisions*) and engaging in actions to realize those aspirations (*external manifestations*) (Ginsberg, Gerber, & Reiff, 1994; McGuire 1997). While aspiration is critical, persistence leads directly to success (Ginsberg et al., 1994). Discussion of traits of successful adults with LD is found in McGuire (1997) and Ginsberg et al. (1994).

In contrast, factors related to lack of academic progress by college SWD include poor motivation for academic success, primary interest in nonacademic areas such as athletics and fraternities, learned helplessness and reliance on accommodations, cognitive rigidity and/or disorganization, low cognitive and/or academic skills, emotional problems, and difficulty with prescribed medication (Minskoff et al., 2000; Vogel & Reder, 1998a, b). According to Scott (1997a) and Vogel and Reder (1998a), SWD often experience problems with independence, organization, and time management, even if these learning skills were acquired in high school. Further, they may deny personal responsibility for academic problems and transfer blame for academic failure to other individuals or to circumstances (Vogel & Reder, 1998a). Finally, even when they take ownership of problems, SWD may not analyze what went wrong and identify workable, replicable solutions (Vogel & Reder, 1998a). These characteristics are associated with a passive learning style and external locus of control.

School psychologists may understand that SWD enter postsecondary education with inadequate academic preparation and an unrealistic understanding of themselves as learners. Yet, because they lack instructional responsibilities, some question their own contribution to transition planning. However, school psychologists, by virtue of their training, expertise, and professional orientation, can assume the following roles: (a) participant, (b) advocate, and (c) program planner.

Although some IEPs indicate college as a postgraduation outcome, inspection of these documents reveals few concrete actions undertaken to assist SWD in attaining this goal. Unfortunately, it is often assumed that SWD who enroll in the general curriculum will, of necessity, acquire the skills and credits required for postsecondary education. But, as a SWD on a pre-college visit eloquently stated, "I've been screwed by my 504 plan!"

School psychologists can fill the gaps in academic preparation and self-awareness of SWD by actively participating in transition activities designed to help them enter college with comparable skills and attitudes to students without disabilities. They can assist SWD with selecting a curriculum that leads to acquisition of skills and knowledge taught in college-prep English, social studies, science, math, and foreign language, rather than agree that SWD should enroll in basic math, general science, and other classes that limit their academic skills and educational horizons. By using information from research to guide academic planning, school psychologists can help SWD identify classes that focus on the skills and knowledge needed for postsecondary education, rather than choose classes based on uncritical acceptance of educational vogues about self-esteem, foreign language learning by SWD, motivation, etc. They can teach SWD how to learn independently and generalize skills and knowledge acquired in one class to others. School psychologists can track progress in development of college-level academic knowledge and skills and teach SWD how to measure their own learning and skill levels.

These efforts hold the promise of helping SWD become academically competitive and develop self-esteem and motivation that reflect struggle and accomplishment. Thus, school psychologists can contribute to SWD's development of an active learning style.

School psychologists must advocate for SWD by reviewing the legal underpinnings of service delivery in postsecondary education and the attributes of successful SWD and adults and then using this information to assist SWD with learning about themselves; developing independence, self-advocacy, and self-determination; and emancipating themselves from unnecessary accommodations. They should insist that SWD take an active role in IEP and Individual Transition Plan (ITP) development, including discussing academic and transition goals and making decisions based on knowledge of personal strengths and weaknesses, skills, interests, and accommodation needs. They can assist SWD in developing skills in leadership, problem solving, and negotiation. By using information from psychological reports, functional assessment and classroom experience, school psychologists and SWD can discuss academic skills, psychological processes, learning style, career interests and goals, and other related factors and their practical implications. By providing information and fostering self-knowledge, school psychologists can facilitate development of realistic self-awareness and self-advocacy skills that will enable SWD to make informed decisions about themselves and their futures.

Recognizing that passive learners expect extensive accommodations and that IEPs often list an extraordinary number of interventions, school psychologists can wean SWD from assistance that is tangentially related to manifestations of the disability and/or perpetuates dependency on interventions. Instead, they clearly identify significant limitations posed by students' disabilities and recommend accommodations that provide access. Then, school psychologists can assist SWD with trying out accommodations and evaluating their effectiveness.

School psychologists can engage in program planning efforts that enable SWD to develop organization, time management, test taking, social, study, and active reading skills needed for postsecondary education and employment. They can promote skill development and acquisition of learning strategies in applied contexts. For example, they could adopt a model of strategy development such as that proposed by Minskoff et al. (2000). Their program moves SWD through a hierarchy of skills needed in postsecondary education, including (a) understanding course requirements listed on the syllabus, (b) time management, (c) study and test taking skills, and (d) tutoring based on generalization of learning strategies.

Career Planning

Postsecondary education is not the endpoint of life or learning. Instead, it demands comparable skills to those expected by employers, such as (a) interpersonal skills, including working as a team member; (b) communication skills, including speaking, writing, and listening; (c) computer skills, including keyboarding and finding and processing information; (d) problem solving, including the application of basic science; (e) math literacy, including reasoning, problem solving, basic statistics, and arithmetic calculations; (f) functional literacy; (g) knowledge of geography, history, and government; (h) cultural awareness, including foreign language and sensitivity to differences; (i) learning ability, including preparation for changing technology and job demands; and (j) personal management skills, including self esteem, goal setting, time management and motivation (McGuire, 1997; Rapp, 1997). Further, both postsecondary education and employment require the same personal attributes such as self-awareness, self-determination, personal responsibility, self-direction, independence, and self-reliance (Heath Resource Center, 1995; McGuire, 1997; Vogel & Reder, 1998b).

A career focus in postsecondary education requires self-awareness combined with informed, realistic goal setting and subsequent selection of a major leading to employment in an area consistent with skills, interests, attitudes, and behavior. Steps for selecting a career, and a major, involve (a) clear description of the skills and knowledge required by a particular job, (b) appraisal of the current skill levels and training needs, and (c) development of a plan to acquire missing skills or knowledge or to develop realistic career goals within a group of related careers (Minskoff, 1996).

School psychologists should foster implementation of career orientation beginning in elementary school by promoting acquisition of academic skills and development of job-related attitudes and abilities such as punctuality, cooperation, and responding appropriately to supervision and criticism. They can encourage active participation of state Vocational Rehabilitation counselors, secondary vocational teachers, and career counselors in IEP and ITP meetings. Additionally, school psychologists help foster work experiences, participation in experiential learning opportunities, and application of academic skills and job-related attitudes and behavior in a work setting while SWD are still enrolled in high school.

Practical Considerations

Special education is designed to meet the unique learning needs of children with disabilities and enable them to participate in the general curriculum, meet high standards for all students, and prepare for independent living, employment, and post-school activities. Postsecondary education is both an outcome and an intermediate step between secondary education and employment, but it is not a continuation of special education.

SWD are expected to compete on the proverbial level academic playing field with non-disabled students in postsecondary education. Consequently, questions such as what is a good school or an easy major for SWD or what accommodations are available to SWD at a particular institution erroneously focus on disability. Similarly, letters from special educators identifying interventions SWD will need to succeed in postsecondary education miss the key connection between access and accommodations.

Fortunately, most students attend in-state postsecondary institutions, usually within 50 miles of home (Habley, 1995; Henderson, 1999). Therefore, school psychologists are encouraged to meet with regional disability services providers to establish professional relationships and discuss academic expectations, admissions criteria, documentation requirements, the organization of various types of services on campus, provision of reasonable accommodations, and availability of special programs. Additionally, they should accumulate catalogs from nearby institutions and develop information sheets on various institutions and their requirements that are useful in transition planning. Finally, school psychologists could visit a college bookstore to examine the reading demand and length of college-level textbooks.

School psychologists are encouraged to develop ongoing group opportunities that help SWD explore differences between high school and postsecondary education. In preparation for these sessions, they can gather information about expectations and differences in requirements, personal responsibilities, and learning environments from multiple sources such as college catalogs, the A-LEC Home Page (2000), Brinckerhoff et al. (1993), and the Heath Resource Center. They can then use these materials to identify topics and content for group activities.

For example, secondary students spend 30 hours weekly in class and another 4 on homework for a total of 34 hours, most of which are devoted to very clear tasks. In contrast, college students enrolled in 12–15 hours of course work weekly are expected to spend 2–3 hours per course hour engaged in independent reading and study for a total of 36–60 hours. Most college-level study time is not designated for particular activities. Thus, lots of free time in college due to few in-class hours is an illusion for most students. The amount of independent learning time coupled with the need to spend more time studying presents a special challenge to SWD.

School psychologists make an enormous contribution to transitioning SWD from high school to postsecondary education when they provide a psychological evaluation at the end of secondary education, even though assessment may be resisted as expensive and unnecessary for academic planning. The psychological report must document that a disability as defined by the ADA and Section 504 exists, diagnose a condition on the basis of adult procedures and DSM IV criteria, identify substantial, functional limitations on life activities, describe how these limitations produce an important impact on the classroom or examinations, and recommend accommodations that provide access. Generic versions of documentation guidelines for postsecondary students with LD are available from www.ahead.org or www.ldonline.org. Specific documentation requirements are available from college disability services offices. However, irrespective of disability and postsecondary institution, criteria for documentation are sufficiently standard that a comprehensive psychological report is applicable across institutions.

SUMMARY

The following quotation summarizes the rationale for transition planning for SWD pursuing postsecondary education:

> In high school, you may have had special classes or resource room teachers for certain

> subjects because of your disability. In college, you are not likely to find such special arrangements. You will be matched with your non-disabled peers, sitting side-by-side in the classroom and expected to compete academically. The instructors will assume that every student in the class has similar educational background and experience. If you come into your classes with less-than-complete academic preparation, you will be at an immediate disadvantage. *Now* is the time to review your preparation and make an honest appraisal of your current knowledge, skills, and abilities (Heath Resource Center, 1997, p. 5).

Current evidence indicates that SWD encounter multiple challenges in postsecondary education because of inadequate academic preparation and learning skills, limited knowledge of their legal rights and obligations, minimal career awareness, and underdeveloped personal/emotional traits. However, the skills and characteristics associated with success in adults with disabilities are considered teachable (Ginzberg, Gerber, & Reiff, 1994). Additionally, SWD who graduate from postsecondary education achieve equivalent outcomes when compared to their non-disabled peers. By engaging in behaviors associated with both traditional and alternative roles, school psychologists will participate in activities for and with SWD that promote successful transition to postsecondary education and realization of career and independent living goals articulated by the IDEA.

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ful for professionals preparing secondary students for higher education.

Heath Resource Center. Washington, DC: American Council on Education. (800-544-3284 V/TTY or www. heath-resource-center.org)
The Heath Resource Center, a clearinghouse on postsecondary education of SWD, provides free materials such as *Getting ready for college: Advising students with LD* (GR); *How to choose a college: Guide for the student with a disability* (CAC); *College freshmen with disabilities: A biennial statistical profile* (CF); and *Creating options: A resource on financial aid for students with disabilities* (FA).

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IV.

Appendices

I

Appendix I — NASP Principles for Professional Ethics

I. INTRODUCTION

The formal principles that elucidate the proper conduct of a professional school psychologist are known as *Ethics*. By virtue of joining the Association, each NASP member agrees to abide by the *Ethics*, acting in a manner that shows respect for human dignity and assuring a high quality of professional service. Although ethical behavior is an individual responsibility, it is in the interest of an association to adopt and enforce a code of ethics. If done properly, members will be guided toward appropriate behavior, and public confidence in the profession will be enhanced. Additionally, a code of ethics should provide due process procedures to protect members from potential abuse of the code. The NASP *Principles for Professional Ethics* have been written to accomplish these goals.

The principles in this manual are based on the assumptions that 1) school psychologists will act as advocates for their students/clients, and 2) at the very least, school psychologists will do no harm. These assumptions necessitate that school psychologists "speak up" for the needs and rights of their students/clients even at times when it may be difficult to do so. School psychologists also are constrained to provide only those services for which they have acquired an acknowledged level of experience, training, and competency. Beyond these basic premises, judgment is required to apply the ethical principles to the fluid and expanding interactions between school and community.

There are many different sources of advice for the proper way to behave; local policies, state laws, federal laws, credentialing standards, professional association position statements, and books that recommend "Best Practices" are just a few. Given one's employment situation and the array of recommendations, events may develop in which the ethical course of action is unclear. The Association will seek to enforce the Ethical Principles with its members. NASP's *Guidelines for the Provision of School Psychological Services* are typically not enforced, although all members should work toward achieving the hallmarks of quality services delivery that are described therein. Similarly, "position statements" and "best practices" documents are not adjudicated. The guidance of the *Ethical Principles* is intentionally broad to make it more enduring than other documents that reflect short-term opinions about specific actions shaped by local events, popular trends, or recent developments in the field. The member must use judgment to infer the situation-specific rule from the general ethical principle. The lack of a specific reference to a particular action does not indicate permission or provide a defense against a charge of unethical practice. (For example, the document frequently refers to a school psychologist's relationships with a hypothetical "student/client." Because school psychologists work in a wide variety of settings, there is no single term that neatly identifies the "other" individual in the professional relationship. Therefore, one should apply *Ethical Principles* in all professional situations, realizing that one is not released from responsibility simply because another individual is not strictly a "student" or a "client.")

The principles in this manual are organized into several sections as a result of editorial judgment. Therefore, principles discussed in one section may also apply to other sections. Every school psychologist, regardless of position (e.g., practitioner, researcher, university trainer, supervisor, state or federal consultant, administrator of psychological services) or setting (e.g., public or private school, community agency, hospital, university, private practice) should reflect upon the theme represented in each ethical principle to determine its application to her or his individual situation. For example, although a given principle may specifically discuss responsibilities toward "clients," the intent is that the standards would also apply to supervisees, trainees, and research participants. At times, the *Ethics* may require a higher standard of behavior than the prevailing policies and pertinent laws. Under such conditions, members should adhere to the *Ethics*. Ethical behavior may occasionally be forbidden by policy or law, in which case members are expected to declare their dilemma and work to bring the discrepant regulations into compliance with the *Ethics*. To obtain additional assistance in applying these principles to a particular setting, a school psychologist should consult with experienced school psychologists and seek advice from the National Association of School Psychologists or the state school psychology association.

Throughout the *Principles for Professional Ethics*, it is assumed that, depending on the role and setting of the school psychologist, the client could include children, parents, teachers and other school personnel, other professionals, trainees, or supervisees. Procedural guidelines for filing an ethical complaint and the adjudication of ethical complaints are available from the NASP office or website (*www.naspweb.org*).

II. PROFESSIONAL COMPETENCY

A. General

1. School psychologists recognize the strengths and limitations of their training and experience, engaging only in practices for which they are qualified. They enlist the assistance of other specialists in supervisory, consultative, or referral roles as appropriate in providing services. They must continually obtain additional training and education to provide the best possible services to children, families, schools, communities, trainees, and supervisees.

2. Competence levels, education, training, and experience are declared and accurately represented to clients in a professional manner.

3. School psychologists do not use affiliations with persons, associations, or institutions to imply a level of professional competence that exceeds that which has actually been achieved.

4. School psychologists engage in continuing professional development. They remain current regarding developments in research, training, and professional practices that benefit children, families, and schools.

5. School psychologists refrain from any activity in which their personal problems or conflicts may interfere with professional effectiveness. Competent assistance is sought to alleviate conflicts in professional relationships.

6. School psychologists know the *Principles for Professional Ethics* and thoughtfully apply them to situations within their employment setting or practice. Ignorance or misapplication of an ethical principle is not a reasonable defense against a charge of unethical behavior.

III. PROFESSIONAL RELATIONSHIPS

A. General

1. School psychologists are committed to the application of their professional expertise for the purpose of promoting improvement in the quality of life for children, their families, and the school community. This objective is pursued in ways that protect the dignity and rights of those involved. School psychologists accept responsibility for the appropriateness of their professional practices.

2. School psychologists respect all persons and are sensitive to physical, mental, emotional, political, economic, social, cultural, ethnic and racial characteristics, gender, sexual orientation, and religion.

3. School psychologists in all settings maintain professional relationships with children, parents, and the school community. Consequently, parents and children are to be fully informed about all relevant aspects of school psychological services in advance. The explanation should take into account language and cultural differences, cognitive capabilities, developmental level, and age so that it may be understood by the child, parent, or guardian.

4. School psychologists attempt to resolve situations in which there are divided or conflicting

interests in a manner that is mutually beneficial and protects the rights of all parties involved.

5. School psychologists are responsible for the direction and nature of their personal loyalties or objectives. When these commitments may influence a professional relationship, school psychologists inform all concerned persons of relevant issues in advance, including, when applicable, their direct supervisor for consideration of reassignment of responsibilities.

6. School psychologists do not exploit clients through professional relationships or condone these actions in their colleagues. No individuals, including children, clients, employees, colleagues, trainees, parents, supervisees, and research participants, will be exposed to deliberate comments, gestures, or physical contacts of a sexual nature. School psychologists do not harass or demean others based on personal characteristics. School psychologists do not engage in sexual relationships with their students, supervisees, trainees, or past or present clients.

7. Dual relationships with clients are avoided. Namely, personal and business relations with clients may cloud one's judgment. School psychologists are aware of these situations and avoid them whenever possible.

8. School psychologists attempt to resolve suspected detrimental or unethical practices on an informal level. If informal efforts are not productive, the appropriate professional organization is contacted for assistance, and procedures established for questioning ethical practice are followed:

   a. The filing of an ethical complaint is a serious matter. It is intended to improve the behavior of a colleague that is harmful to the profession and/or the public. Therefore, school psychologists make every effort to discuss the ethical principles with other professionals who may be in violation.

   b. School psychologists enter into the complaint process thoughtfully and with concern for the well-being of all parties involved. They do not file or encourage the filing of an ethics complaint that is frivolous or motivated by revenge.

   c. Some situations may be particularly difficult to analyze from an ethical perspective. School psychologists consult ethical standards from related fields and seek assistance from knowledgeable, experienced school psychologists and relevant state/national associations to ascertain an appropriate course of action.

   d. School psychologists document specific instances of suspected ethical violations (i.e., date, time, relevant details) as well as attempts to resolve these violations.

9. School psychologists respect the confidentiality of information obtained during their professional work. Information is revealed only with the informed consent of the child, or the child's parent or legal guardian, except in those situations in which failure to release information would result in clear danger to the child or others. Obsolete confidential information will be shredded or otherwise destroyed before placement in recycling bins or trash receptacles.

10. School psychologists discuss confidential information only for professional purposes and only with persons who have a legitimate need to know.

11. School psychologists inform children and other clients of the limits of confidentiality at the outset of establishing a professional relationship.

B. Students

1. School psychologists understand the intimate nature of consultation, assessment, and direct service. They engage only in professional practices that maintain the dignity and integrity of children and other clients.

2. School psychologists explain important aspects of their professional relationships in a clear, understandable manner that is appropriate to the child's or other client's age and ability to understand. The explanation includes the reason why

services were requested, who will receive information about the services provided, and the possible outcomes.

3. When a child initiates services, school psychologists understand their obligation to respect the rights of a child to initiate, participate in, or discontinue services voluntarily (See III-C-2 for further clarification). When another party initiates services, the school psychologist will make every effort to secure voluntary participation of the child.

4. Recommendations for program changes or additional services will be discussed with appropriate individuals, including any alternatives that may be available.

C. Parents, Legal Guardians, and Appointed Surrogates

1. School psychologists explain all services to parents in a clear, understandable manner. They strive to propose a set of options that takes into account the values and capabilities of each parent. Service provision by interns, practicum students, or other trainees should be explained and agreed to in advance.

2. School psychologists recognize the importance of parental support and seek to obtain that support by assuring that there is direct parent contact prior to seeing the child on an ongoing basis. (Emergencies and "drop-in" self-referrals will require parental notification as soon as possible. The age and circumstances under which children may seek services without parental consent varies greatly; be certain to comply with III-D-5.) School psychologists secure continuing parental involvement by a frank and prompt reporting to the parent of findings and progress that conforms to the limits of previously determined confidentiality.

3. School psychologists encourage and promote parental participation in designing services provided to their children. When appropriate, this includes linking interventions between the school and the home, tailoring parental involvement to the skills of the family, and helping parents gain the skills needed to help their children.

4. School psychologists respect the wishes of parents who object to school psychological services and attempt to guide parents to alternative community resources.

5. School psychologists discuss with parents the recommendations and plans for assisting their children. The discussion includes alternatives associated with each set of plans, which show respect for the ethnic/cultural values of the family. The parents are informed of sources of help available at school and in the community.

6. School psychologists discuss the rights of parents and children regarding creation, modification, storage, and disposal of confidential materials that will result from the provision of school psychological services.

D. Community

1. School psychologists also are citizens, thereby accepting the same responsibilities and duties as any member of society. They are free to pursue individual interests, except to the degree that those interests compromise professional responsibilities.

2. School psychologists may act as individual citizens to bring about social change in a lawful manner. Individual actions should not be presented as, or suggestive of, representing the field of school psychology or the Association.

3. As employees or employers, in public or independent practice domains, school psychologists do not engage in or condone practices that discriminate against children, other clients, or employees (if applicable) based on race, disability, age, gender, sexual orientation, religion, national origin, economic status, or native language.

4. School psychologists avoid any action that could violate or diminish the civil and legal rights of children and other clients.

5. School psychologists adhere to federal, state, and local laws and ordinances governing their prac-

tice and advocacy efforts. If regulations conflict with ethical guidelines, school psychologists seek to resolve such conflict through positive, respected, and legal channels, including advocacy efforts involving public policy.

E. Other Professionals

1. To best meet the needs of children and other clients, school psychologists cooperate with other professional disciplines in relationships based on mutual respect.

2. School psychologists recognize the competence of other professionals. They encourage and support the use of all resources to best serve the interests of children and other clients.

3. School psychologists should strive to explain their field and their professional competencies, including roles, assignments, and working relationships to other professionals.

4. School psychologists cooperate and coordinate with other professionals and agencies with the rights and needs of children and other clients in mind. If a child or other client is receiving similar services from another professional, school psychologists promote coordination of services.

5. The child or other client is referred to another professional for services when a condition or need is identified which is outside the professional competencies or scope of the school psychologist.

6. When transferring the intervention responsibility for a child or other client to another professional, school psychologists ensure that all relevant and appropriate individuals, including the child/client when appropriate, are notified of the change and reasons for the change.

7. When school psychologists suspect the existence of detrimental or unethical practices by a member of another profession, informal contact is made with that person to express the concern. If the situation cannot be resolved in this manner, the appropriate professional organization is contacted for assistance in determining the procedures established by that profession for examining the practices in question.

8. School psychologists who employ, supervise, or train other professionals, accept the obligation to provide continuing professional development. They also provide appropriate working conditions, fair and timely evaluation, and constructive consultation.

F. School Psychologist Trainees and Interns

1. School psychologists who supervise interns are responsible for all professional practices of the supervisees. They assure children and other clients and the profession that the intern is adequately supervised as designated by the practice guidelines and training standards for school psychologists.

2. School psychologists who conduct or administer training programs provide trainees and prospective trainees with accurate information regarding program sponsorships/ endorsements/accreditation, goals/objectives, training processes and requirements, and likely outcomes and benefits.

3. School psychologists who are faculty members in colleges or universities or who supervise clinical or field placements apply these ethical principles in all work with school psychology trainees. In addition, they promote the ethical practice of trainees by providing specific and comprehensive instruction, feedback, and mentoring.

4. School psychology faculty members and clinical or field supervisors uphold recognized standards of the profession by providing training related to high quality, responsible, and research-based school psychology services. They provide accurate and objective information in their teaching and training activities; identify any limitations in information; and acknowledge disconfirming data, alternative hypotheses, and explanations.

5. School psychology faculty members and clinical or field supervisors develop and use evaluation practices for trainees that are objective, accurate, and fair.

IV. PROFESSIONAL PRACTICES—GENERAL PRINCIPLES

A. Advocacy

1. School psychologists typically serve multiple clients including children, parents, and systems. When the school psychologist is confronted with conflicts between client groups, the primary client is considered to be the child. When the child is not the primary client, the individual or group of individuals who sought the assistance of the school psychologist is the primary client.

2. School psychologists consider children and other clients to be their primary responsibility, acting as advocates for their rights and welfare. If conflicts of interest between clients are present, the school psychologist supports conclusions that are in the best interest of the child. When choosing a course of action, school psychologists take into account the rights of each individual involved and the duties of school personnel.

3. School psychologists' concerns for protecting the rights and welfare of children are communicated to the school administration and staff as the top priority in determining services.

4. School psychologists understand the public policy process to assist them in their efforts to advocate for children, parents, and systems.

B. Service Delivery

1. School psychologists are knowledgeable of the organization, philosophy, goals, objectives, and methodologies of the setting in which they are employed.

2. School psychologists recognize that an understanding of the goals, processes, and legal requirements of their particular workplace is essential for effective functioning within that setting.

3. School psychologists attempt to become integral members of the client service systems to which they are assigned. They establish clear roles for themselves within that system.

4. School psychologists who provide services to several different groups may encounter situations in which loyalties are conflicted. As much as possible, the stance of the school psychologist is made known in advance to all parties to prevent misunderstandings.
5. School psychologists promote changes in their employing agencies and community service systems that will benefit their clients.

C. Assessment and Intervention

1. School psychologists maintain the highest standard for educational and psychological assessment and direct and indirect interventions.

   a. In conducting psychological, educational, or behavioral evaluations or in providing therapy, counseling, or consultation services, due consideration is given to individual integrity and individual differences.

   b. School psychologists respect differences in age, gender, sexual orientation, and socioeconomic, cultural, and ethnic backgrounds. They select and use appropriate assessment or treatment procedures, techniques, and strategies. Decision-making related to assessment and subsequent interventions is primarily data-based.

2. School psychologists are knowledgeable about the validity and reliability of their instruments and techniques, choosing those that have up-to-date standardization data and are applicable and appropriate for the benefit of the child.

3. School psychologists use multiple assessment methods such as observations, background information, and information from other professionals, to reach comprehensive conclusions.

4. School psychologists use assessment techniques, counseling and therapy procedures, consultation techniques, and other direct and indirect service methods that the profession considers to be responsible, research-based practice.

5. School psychologists do not condone the use of psychological or educational assessment tech-

niques, or the misuse of the information these techniques provide, by unqualified persons in any way, including teaching, sponsorship, or supervision.

6. School psychologists develop interventions that are appropriate to the presenting problems and are consistent with data collected. They modify or terminate the treatment plan when the data indicate the plan is not achieving the desired goals.

7. School psychologists use current assessment and intervention strategies that assist in the promotion of mental health in the children they serve.

D. Reporting Data and Conference Results

1. School psychologists ascertain that information about children and other clients reaches only authorized persons.

    a. School psychologists adequately interpret information so that the recipient can better help the child or other clients.

    b. School psychologists assist agency recipients to establish procedures to properly safeguard confidential material.

2. School psychologists communicate findings and recommendations in language readily understood by the intended recipient. These communications describe potential consequences associated with the proposals.

3. School psychologists prepare written reports in such form and style that the recipient of the report will be able to assist the child or other clients. Reports should emphasize recommendations and interpretations; unedited computer-generated reports, pre-printed "check-off " or "fill-in-the-blank" reports, and reports that present only test scores or global statements regarding eligibility for special education without specific recommendations for intervention are seldom useful. Reports should include an appraisal of the degree of confidence that could be assigned to the information. Alterations of previously released reports should be done only by the original author.

4. School psychologists review all of their written documents for accuracy, signing them only when correct. Interns and practicum students are clearly identified as such, and their work is co-signed by the supervising school psychologist. In situations in which more than one professional participated in the data collection and reporting process, school psychologists assure that sources of data are clearly identified in the written report.

5. School psychologists comply with all laws, regulations, and policies pertaining to the adequate storage and disposal of records to maintain appropriate confidentiality of information.

E. Use of Materials and Technology

1. School psychologists maintain test security, preventing the release of underlying principles and specific content that would undermine the use of the device. School psychologists are responsible for the security requirements specific to each instrument used.

2. School psychologists obtain written prior consent or they remove identifying data presented in public lectures or publications.

3. School psychologists do not promote or encourage inappropriate use of computer-generated test analyses or reports. In accordance with this principle, a school psychologist would not offer an unedited computer report as his or her own writing or use a computer-scoring system for tests in which he or she has no training. They select scoring and interpretation services on the basis of accuracy and professional alignment with the underlying decision rules.

4. School psychologists maintain full responsibility for any technological services used. All ethical and legal principles regarding confidentiality, privacy, and responsibility for decisions apply to the school psychologist and cannot be transferred to equipment, software companies, or data-processing departments.

5. Technological devices should be used to improve the quality of client services. School psychologists will resist applications of technology that ultimately reduce the quality of service.

6. To ensure confidentiality, student/client records are not transmitted electronically without a guarantee of privacy. In line with this principle, a receiving FAX machine must be in a secure location and operated by employees cleared to work with confidential files, and e-mail messages must be encrypted or else stripped of all information that identifies the student/client.

7. School psychologists do not accept any form of remuneration in exchange for data from their client data base without informed consent.

F. Research, Publication, and Presentation

1. When designing and implementing research in schools, school psychologists choose topics and employ research methodology, subject selection techniques, data-gathering methods, and analysis and reporting techniques that are grounded in sound research practice. School psychologists clearly identify their level of training and graduate degree on all communications to research participants.

2. Prior to initiating research, school psychologists working in agencies without review committees should have at least one other colleague, preferably a school psychologist, review the proposed methods.

3. School psychologists follow all legal procedures when conducting research, including following procedures related to informed consent, confidentiality, privacy, protection from harm or risks, voluntary participation, and disclosure of results to participants. School psychologists demonstrate respect for the rights of and well-being of research participants.

4. In publishing reports of their research, school psychologists provide discussion of limitations of their data and acknowledge existence of disconfirming data, as well as alternate hypotheses and explanations of their findings.

5. School psychologists take particular care with information presented through various impersonal media (e.g., radio, television, public lectures, popular press articles, promotional materials.). Recipients should be informed that the information does not result from or substitute for a professional consultation. The information should be based on research and experience within the school psychologist's recognized sphere of competence. The statements should be consistent with these ethical principles and should not mistakenly represent the field of school psychology or the Association.

6. School psychologists uphold copyright laws in their publications and presentations and obtain permission from authors and copyright holders to reproduce other publications or materials. School psychologists recognize that federal law protects the rights of copyright holders of published works and authors of non-published materials.

7. When publishing or presenting research or other work, school psychologists do not plagiarize the works or ideas of others and acknowledge sources and assign credit to those whose ideas are reflected.

8. School psychologists do not publish or present fabricated or falsified data or results in their publications and presentations.

9. School psychologists make available data or other information upon which conclusions and claims reported in publications and presentations are based, provided that the data are needed to address a legitimate concern or need and that the confidentiality and other rights of all research participants are protected.

10. If errors are discovered after the publication or presentation of research and other information, school psychologists make efforts to correct errors by publishing errata, retractions, or corrections.

11. School psychologists accurately reflect the contributions of authors and other individuals in

publications and presentations. Authorship credit and the order in which authors are listed are based on the relative contributions of the individual authors. Authorship credit is given only to individuals who have made substantial professional contributions to the research, publication, or presentation.

12. School psychologists only publish data or other information that make original contributions to the professional literature. School psychologists do not publish the same findings in two or more publications and do not duplicate significant portions of their own previous publications without permission of copyright holders.

13. School psychologists who participate in reviews of manuscripts, proposals, and other materials for consideration for publication and presentation respect the confidentiality and proprietary rights of the authors. School psychologists who review professional materials limit their use of the materials to the activities relevant to the purposes of the professional review. School psychologists who review professional materials do not communicate the identity of the author, quote from the materials, or duplicate or circulate copies of the materials without the author's permission.

V. PROFESSIONAL PRACTICE SETTINGS—INDEPENDENT PRACTICE

A. Relationship with Employers

1. Some school psychologists are employed in a variety of settings, organizational structures, and sectors and, as such, may create a conflict of interest. School psychologists operating in these different settings recognize the importance of ethical standards and the separation of roles and take full responsibility for protecting and completely informing the consumer of all potential concerns.

2. School psychologists dually employed in independent practice and in a school district may not accept any form of remuneration from clients who are entitled to the same service provided by the school district employing the school psychologist. This includes children who attend the nonpublic schools within the school psychologist's district.

3. School psychologists in independent practice have an obligation to inform parents of any school psychological services available to them at no cost from the public or private schools prior to delivering such services for remuneration.

4. School psychologists working in both independent practice and employed by school districts conduct all independent practice outside of the hours of contracted public employment.

5. School psychologists engaged in independent practice do not use tests, materials, equipment, facilities, secretarial assistance, or other services belonging to the public sector employer unless approved in advance by the employer.

B. Service Delivery

1. School psychologists conclude a financial agreement in advance of service delivery.

   a. School psychologists ensure to the best of their ability that the client clearly understands the agreement.

   b. School psychologists neither give nor receive any remuneration for referring children and other clients for professional services.

2. School psychologists in independent practice adhere to the conditions of a contract until service thereunder has been performed, the contract has been terminated by mutual consent, or the contract has otherwise been legally terminated.

3. School psychologists in independent practice prevent misunderstandings resulting from their recommendations, advice, or information. Most often, direct consultation between the school psychologist in private practice and the school psychologist responsible for the student in the public sector will resolve minor differences of opinion without unnecessarily confusing the parents, yet keep the best interests of the student or client in mind.

4. Personal diagnosis and therapy are not given by means of public lectures, newspaper columns, magazine articles, radio and television programs, or mail. Any information shared through mass media activities is general in nature and is openly declared to be so.

C. Announcements/Advertising

1. Appropriate announcement of services, advertising, and public media statements may be necessary for school psychologists in independent practice. Accurate representations of training, experience, services provided, and affiliation are done in a restrained manner. Public statements must be based on sound and accepted theory, research, and practice.

2. Listings in telephone directories are limited to the following: name/names, highest relevant degree, state certification/licensure status, national certification status, address, telephone number, brief identification of major areas of practice, office hours, appropriate fee information, foreign languages spoken, policy regarding third-party payments, and license number.

3. Announcements of services by school psychologists in independent practice are made in a formal, professional manner using the guidelines of V-C-2. Clear statements of purposes with unequivocal descriptions of the experiences to be provided are given. Education, training, and experience of all staff members are appropriately specified.

4. School psychologists in independent practice may use brochures in the announcement of services. The brochures may be sent to other professionals, schools, business firms, governmental agencies, and other similar organizations.

5. Announcements and advertisements of the availability of publications, products, and services for sale are professional and factual.

6. School psychologists in independent practice do not directly solicit clients for individual diagnosis, therapy, and for the provision of other school psychological services.

7. School psychologists do not compensate in any manner a representative of the press, radio, or television in return for personal professional publicity in a news item.

PROCEDURAL GUIDELINES FOR THE ADJUDICATION OF ETHICAL COMPLAINTS

Revised in 1997

Section I. Responsibility and Function

The Ethical and Professional Standards Committee shall be responsible for developing and maintaining a clearly defined position for the Association regarding the ethical and professional conduct principles to be adhered to by its members and also the members of the National School Psychology Certification System (NSPCS). The major area of particular ethical concern to the Committee will be that of the protection and general well-being of individuals served by school psychologists, in schools and in private practice, and in institutions or agencies through which the service is rendered. The Committee is further charged to study and make recommendations to the Executive Council when it is alleged that a NASP or NSPCS member has failed to follow the ethical principles of the Association.

Members of the Ethical and Professional Standards Committee recognize that their role is an extremely important one, involving the rights of many people, the reputation of the profession and the careers of individual professionals. They bear a heavy responsibility because their recommendations may alter the lives of others. Therefore, they must be alert to personal, social, organizational, financial or political situations or pressures that might lead to misuse of their influence. The Ethical and Professional Standards committee shall assure the responsible use of all information obtained in the course of an inquiry or investigation. The objective with regard to the individual shall, whenever possible, be constructive, rather than punitive in character.

The function of the Committee in investigating complaints of alleged ethical misconduct involves obtaining a thorough and impartial account of the behaviors or incidents in order to be able to evaluate the character of the behaviors in question. When responding to complaints, members of the Ethics and

Professional Standards Committee have the responsibility to consider the competency of the complainant, to act in an unbiased manner, to work expeditiously, and to safeguard the confidentiality of the Committee's activities. Committee members and their designees have the added responsibility to follow procedures which safeguard the rights of all individuals involved in the complaint process.

Section II. Scope and Authority

The Ethical and Professional Standards Committee shall address issues of ethical misconduct in an investigatory, advisory, educative and/or remedial role. What constitutes ethical misconduct shall be determined on the basis of the provisions of the NASP *Principles for Professional Ethics* and any published advisory opinions that from time to time are developed by the Ethical and Professional standards Committee. In applying the Principles, the authorized opinions of those charged by NASP with the administration and interpretation of the ethical principles shall be binding on all NASP members, individuals who hold a certificate issued by the National School Psychology Certification Board (NSPCB), and on the members of state associations affiliated with NASP.

When investigating and/or responding to a complaint or inquiry, the Ethical and Professional Standards Committee shall conduct itself in a manner consistent with the Bylaws of the Association and the NASP *Principles for Professional Ethics* and shall also be bound by these procedures. The Ethical and Professional Standards Committee shall endeavor to settle cases informally, recommend disciplinary action when unethical conduct has occurred, report regularly to the Delegate Assembly on its activities and shall revise and amend (subject to ratification by the Delegate Assembly) the NASP Principles and these procedures in a timely manner. The Association may at the recommendation of the Ethical and Professional Standards Committee, and in accordance with the Bylaws of the Association, expel a NASP member. The Ethical and Professional Standards committee will also issue a recommendation to the NSPCB regarding charges filed against any nationally certified school psychologist.

When a complaint is received about a non-member, the Ethical and Professional Standards Committee shall respond only if the individual complained against is a member of the National School Psychology Certification System. Otherwise, the committee may act only in an advisory or educative fashion and shall have no authority to investigate the case or to discipline the individual in question.

Complaints that address concerns about professional standards, organizations, employers and the like, shall be referred to the Ethical and Professional Standards Committee. Nevertheless, it should be recognized that in situations where an individual school psychologist is being coerced to behave unethically, he/she bears certain ethical responsibilities and to fail to take appropriate action, e.g., refusing to behave unethically, could eventuate in charges of misconduct against the individual psychologist involved. However, as a rule such "standards" concerns would not fall under the purview of this complaint process.

Complaints received by the Ethical and Professional Standards Committee shall be reviewed and judged on the basis of the *Principles for Professional Ethics* in force at the time of the alleged misconduct. Investigation and adjudication of ethical complaints shall be on the basis of the "Procedural Guidelines for the Adjudication of Ethical Complaints" in force at the time the complaint is received by the Committee.

Section III. Receipt and Acknowledgment of Complaints and Inquiries

A. The Ethical and Professional Standards committee shall recognize and respond to all complaints and inquiries from any responsible individual or group of individuals in accordance with these procedures. The individual who petitions the Committee (hereinafter referred to as the complainant) need not be a member of NASP or the affiliated state association. Anonymous letters and phone calls will not be recognized. Complaints by members which are judged by the committee to be frivolous or revengeful may be cause for action against the complainant.

B. An oral complaint or inquiry may be informally handled, referred elsewhere when appropriate, or an Ethical and Professional Standards Committee chairperson may request that the complaint be formally submitted in writing. Only written statements expressing the details of the alleged misconduct will be accepted for action. Such written statements shall be signed by the complainant and should state, in as much detail as practicable, the facts upon which the complaint is based. NASP will maintain appropriate records regarding the number and nature of all written complaints filed against NASP members and members of the National School Psychology Certification System.All the correspondence, records and activities of the Ethical and Professional Standards Committee shall remain confidential.

C. Within 15 days of receipt of a written statement outlining the details of the alleged misconduct, the chairpersons of the Ethical and Professional Standards Committee shall do the following:

1. Determine if the individual against whom the complaint is made (hereinafter referred to as the respondent), is a member of NASP or an NCSP. If the respondent is not a member of NASP or an NCSP, the complainant shall be so advised and when appropriate, referred to other agencies and/or associations who would have authority in the matter.

2. If the respondent is a member of NASP or an NCSP, the Ethical and Professional Standards Committee chairpersons, with any advisory opinions deemed necessary, shall review the complaint. If it is determined that the alleged misconduct, even if true, would not constitute an actual violation of the NASP Principles, a chairperson shall notify the complainant.

3. If the information obtained from the complainant is insufficient to make a determination regarding the alleged misconduct, the chairpersons may send a written request to the complainant, asking for clarification and/or additional information as would be needed to make such a determination.

4. If it is determined that the alleged misconduct, if substantiated, would constitute an actual violation of NASP Principles, the Ethical and Professional Standards Committee chairperson shall direct a letter to and advise the complainant that the allegation will be investigated by the Committee. The complainant shall be asked to sign a release, authorizing that his/her name be revealed to the respondent.

5. If the complainant refuses to permit his/her identity to be made known to the respondent, such refusal will serve as a basis for forfeiting the complaint process. However, the Ethical and Professional Standards Committee may proceed on its own volition when a member appears to have engaged in ethical misconduct that tends to injure the Association or to adversely affect its reputation, or that is clearly inconsistent with or destructive of the goals and objectives of the Association.

Section IV. Conduct of an Informal Inquiry

A. Within 15 days of receipt of the signed release, the Ethical and Professional Standards Committee shall inform the respondent, in writing, with the envelope marked "confidential," that a complaint has been filed against him/her. This letter shall describe the nature of the complaint, indicate the principle(s) which appear to have been violated, and request the respondent's cooperation in obtaining a full picture of the circumstances which led to the allegations. A copy of the NASP *Principles for Professional Ethics*, these procedures, and any pertinent advisory opinions of the Ethical and Professional Standards committee shall also be enclosed. Ordinarily the respondent shall be informed of the name of the complainant, when written permission to do so has been obtained. (See Section III, C-5 above, for exception.)

B. The respondent shall be asked to provide a written statement outlining his/her view of the situation in order that the Committee may be cognizant of all relevant aspects of the case.

C. Whenever possible, the Ethical and Professional Standards Committee shall attempt to resolve differences privately and informally through further correspondence with all parties involved. An attempt shall be made to bring about an adjustment through meditative efforts in the interest of correcting a general situation or settling the particular issues between the parties involved.

D. If the respondent does not respond to the original inquiry within 30 days, a follow-up letter shall be sent to the respondent by registered or certified mail, marked "confidential," with a return receipt requested.

E. If the respondent refuses to reply to the Committee's inquiry or otherwise cooperate with the Committee, the Committee may continue its investigation, noting in the record the circumstances of the respondent's failure to cooperate. The Committee shall also inform the respondent that his/her lack of cooperation may result in action which could eventuate in his/her being dropped from membership in the Association.

F. As a rule, if the complainant wishes to withdraw the complaint, the inquiry is terminated, except in extreme cases where the Committee feels the issues in the case are of such importance as to warrant completing the investigation in its own right and in the interest of the public welfare or that of the Association. (See Section III, C-5.)

G. The Association will not recognize a respondent's resignation from membership while there is a complaint pending before the Ethical and Professional Standards Committee or before an ethics committee of a state association unless he/she submits an affidavit stating that:

1. The resignation is free and voluntary;
2. He/she is aware of a pending investigation into allegations of misconduct;
3. He/she acknowledges that the material facts upon which the complaint is based are true; and
4. He/she submits the resignation because he/she knows that if charges are predicated on the misconduct under investigation, he/she could not defend him/herself successfully against them.

H. Within 30 days of receipt of the written statement from the respondent, or (in the event the respondent fails to reply or otherwise cooperate), within 30 days of receipt of the return receipt requested from the second notification by the Committee (Section IV, D, E), the chairpersons, through advice of the Committee, shall determine if a violation may have occurred, and if so, what principles have potentially been violated.

I. If, in the opinion of the Committee, the complaint has a basis in fact but is considered likely to be corrected without further action, the chairpersons shall so indicate in the record and shall so inform all parties involved.

J. If, in the opinion of the chairpersons, the issues raised by the complaint would, if true, constitute a violation of the principles, and if it appears that the complaint cannot be resolved by less formal means, the chairpersons, shall, in coordination with the appropriate State Delegate, appoint two impartial NASP members from the state in which the respondent practices to form an Ad Hoc Committee, together with the chairpersons of the Ethical and Professional Standards Committee. The purpose of this Ad Hoc Committee is to investigate the case, to evaluate the character of the behavior(s) in question and to make recommendations to the Ethics and Professional Standards Committee for final disposition of the case.

K. The Ethical and Professional Standards Committee chairpersons shall transmit to the members of the Ad Hoc Committee, by registered or certified mail, in envelopes marked "confidential," copies of the following:

1. The original complaint or material;
2. The letter to the respondent apprising him/her of the nature of the alleged violation;
3. The response from the respondent; and
4. Any such further facts related to the case as the chairpersons can assemble from sources of evident reliability.

L. The Ad Hoc Committee shall then determine whether:

1. The case shall be closed;

2. Further investigation by correspondence is indicated;

3. Future investigation by a Fact-Finding Committee is indicated (see Section V);

4. The respondent and/or complainant shall be asked to appear before the Ad Hoc Committee; or

5. Some other action or a combination thereof shall be taken.

Section V. Recommendations of the Ad Hoc Committee

A. When the Ad Hoc Committee has obtained sufficient information with which to reach a decision, or in any event, in not more than 60 days from the formation of the Ad Hoc Committee, the Ethical and Professional Standards Committee chairpersons shall request that the Ad Hoc Committee vote on the disposition of the case.

B. If, in the unanimous opinion of the Ad Hoc Committee members, a violation of the NASP Principles has occurred and if, in the opinion of the Ad Hoc Committee, the unethical behavior can be terminated by action of the Committee itself, one or more of the following recommendations shall be made:

1. The Ad Hoc Committee shall request, in writing, that the respondent take corrective measures to modify or stop certain activities or practices;

2. The Ad Hoc Committee shall, in writing, censure or reprimand the respondent;

3. The Ad Hoc Committee shall require that the respondent provide restitution to or apologize, in writing, to an individual, or organization harmed by the respondent's unethical conduct;

4. The Ad Hoc Committee shall recommend that the respondent be placed under a period of probation of membership or surveillance under fixed terms agreed to by the respondent;

5. The Ad Hoc Committee may recommend a combination of the above four recommendations. (NOTE - In all cases, supervision of the member's behavior for a period of time will be required component of the corrective action.)

C. Within 5 days, the Ethical and Professional Standards Committee chairpersons shall inform the respondent of the Ad Hoc Committee's determination and recommendations. The respondent shall be notified that he/she may make a request for a hearing on the charges within 30 days from the receipt of a statement of the charges and the Committee's findings and recommendations. Such a request shall be in writing and directed to the President of the Association.

D. The Ethical and Professional Standards committee chairperson shall draft a report summarizing the findings and recommendations of the Ad Hoc Committee, copies of which shall be distributed to the two other Ad Hoc Committee members, the respondent and, at the Committee's discretion, the complainant. This report shall be transmitted in envelopes marked "confidential" in the case of the respondent, by registered or certified mail with a return receipt requested.

E. A summary report shall then be edited by the Ethical and Professional Standards Committee chairpersons, ensuring the confidentiality of all persons involved is strictly maintained, for purposes of reporting to the Delegate Assembly at the next regularly scheduled meeting on the activities and recommendations of the Ethical and Professional Standards Committee and its designees, e.g., any Ad Hoc Committee so convened in the interim.

F. The unanimous decision of the Ad Hoc Committee shall be binding on the Association unless overturned by the Hearing Committee, Executive Council or Delegate Assembly in accordance with the procedures outlined herein. (See Section VIII)

Section VI. Conduct of a Formal Investigation

A. A formal investigation shall be undertaken if any one of the following circumstances prevails:

1. The Ad Hoc Committee finds that it lacks sufficient data with which to proceed;

2. The Ad Hoc Committee is unable to reach consensus;

3. The recommendations of the Ad Hoc Committee do not lead to resolution of the problem; or

4. The facts alleged in the complaint, if substantiated, would likely require action leading to termination of the respondent's membership in the Association, or revocation of a National Certificate.

B. When a formal investigation is warranted under these procedures, the Ethical and Professional Standards Committee chairpersons, in coordination with the President of the Association, shall appoint a Fact-Finding Committee, which shall appoint its own chairperson, to consist of not less than three nor more than five members of the Association, for the specific purpose of more fully investigating the charges. No member previously involved in reviewing the case may serve on the Fact-Finding Committee. The Ethical and Professional Standards Committee chairpersons shall serve on the Fact-Finding Committee in ex-officio status in order to apprise the Fact-Finding Committee of the procedures by which they are bound and to serve in an advisory capacity.

C. The Fact-Finding Committee shall be bound by the same procedures and timelines as outlined in Sections III and IV of these procedures. In addition, the Fact-Finding Committee may, at the discretion of the Executive Council, retain a legal advisor as counsel to the committee while investigating its case.

D. The respondent may seek advice from any individual, including an attorney or another member of the Association, for assistance in preparing and presenting documentary evidence requested by the Fact-Finding Committee.

Section VII. Recommendations of the Fact-Finding Committee

A. If the formal investigation was convened following a decision by consensus of the Ad Hoc Committee, and if the Fact-Finding Committee unanimously concurs with the Ad Hoc Committee's findings and recommendations, all parties shall be so informed and this decision shall be binding on the Association unless overturned by the Hearing Committee, Executive Council or Delegate Assembly, in accordance with the procedures outlined herein.

B. If the case was not resolved at the Ad Hoc Committee level, the Fact-Finding Committee must announce its findings and recommendations within the prescribed timelines. The Fact-Finding Committee may exercise any of the recommendations open to the Ad Hoc Committee (Section V, B) and in addition may also recommend that the respondent's membership in the Association be terminated.

C. Should the Fact-Finding Committee so recommend, the chairpersons of the Ethical and Professional Standards Committee must present the findings and recommendations of the Fact-Finding Committee to the NASP Executive Council and Delegate Assembly. A summary report shall be prepared, such that the confidentiality of all parties involved, i.e., identifying information of the informer, is strictly maintained. The case shall be reviewed in sufficient detail so as to allow the Executive Council and the Delegate Assembly members to vote to concur or overrule the decision of the Fact-Finding Committee.

D. In accordance with NASP Bylaws, cases involving a recommendation for expulsion from the Association by the Ethical and Professional Standards Committee shall be confirmed by a 2/3 vote of the Executive Council, with a majority ratification by the Delegate Assembly. If the expelled NASP member is also a member of the NSPCS, the expulsion shall be reported to the NSPCB along with a recommendation for further action, if any, the NSPCB should take.

E. At the discretion of the Executive Council and Delegate Assembly, the respondent may be allowed to voluntarily resign his/her membership in the Association.

F. Within five days, the Ethical and Professional Standards Committee chairpersons shall inform the respondent of the decision of the Executive Council and Delegate Assembly in the same manner as provided in Section V-C of these procedures.

G. If the Executive Council and/or the Delegate Assembly do not concur with the Committee's recommendation for expulsion from membership, the case shall be remanded back to the Fact-Finding Committee for consideration of a lesser penalty.

Section VIII. Conduct of the Hearing Committee

A. Within 30 days of receipt of a statement of the charges against him/her and a statement of the Committee's findings and recommendations, the respondent has the right to request from the President of the Association a hearing on the charges. This right shall be considered waived if such request is not made in writing within the 30 day period.

B. If the respondent does request a hearing, the President shall select a panel of ten members of the Association, none of whom shall be members of the Ethical and Professional Standards Committee or have had any prior connection with the case. From the panel, the respondent shall have 30 days in which to choose a Hearing committee of five members. If he/she does not make a selection, the President shall choose the five members to comprise the Hearing Committee.

C. The President shall select a chairperson of the Hearing Committee who shall conduct the hearing and assure that the procedures are properly observed. There shall be no communication between the members of the Hearing Committee and the Ethical and Professional Standards Committee or any of its representatives prior to the hearing itself.

D. A date for the hearing shall be set by the President with the concurrence of the respondent. In no event shall the hearing take place later than 90 days from the date of the respondent's request for a hearing.

E. At least 30 days prior to the hearing, the respondent and the Hearing Committee members shall be provided with copies of all documents to be presented and the names of all witnesses that will be offered by the Ethical and Professional standards Committee in support of the charges.

F. Presentation of the case against the respondent shall be the responsibility of the Ethical and Professional Standards Committee, or such others as the Ethical and Professional Standards Committee has designated to investigate the complaint. Legal counsel for the Association may participate fully in the presentation of the case.

G. All evidence that is relevant and reliable, as determined by the chairperson of the Hearing Committee, shall be admissible. Evidence of mitigating circumstances may be presented by the respondent.

H. The respondent shall have the right to counsel, to present witnesses and documents and to cross-examine the witnesses offered by the Ethical and Professional Standards Committee.

I. The hearing may be adjourned as necessary and the Ethical and Professional Standards Committee may introduce rebuttal evidence.

J. In the interest of obtaining a full and accurate record of the hearing, a tape recorder or other transcription device may be used, at the discretion of the Hearing Committee and the respondent.

Section IX. Recommendations of the Hearing Committee

A. At the conclusion of the hearing, the Hearing Committee shall have 30 days in which to issue its report and recommendations.

B. If the Hearing Committee recommends that the respondent be dropped from membership or that the respondent be permitted to resign, the matter shall be referred to the Executive Council. A recommendation that the respondent be expelled or be allowed to resign must be made by 4 of the 5 committee members. Other disciplinary measures would be decided upon per individual case and would require a simple majority vote.

C. Only the disciplinary measures specified by the Ethical and Professional Standard Committee in the formal statement of charges, or a lesser penalty, shall be recommended by the Hearing Committee. Although the Ethical and Professional Standards Committee recommendations may be modified by the Hearing Committee, it may not increase the penalty recommended.

D. The Hearing Committee shall submit its report and recommendations simultaneously to the Executive Council and to the respondent.

E. The respondent shall have 15 days from receipt of the Hearing Committee's report in which to file a written statement with the Executive Council. The Ethical and Professional standards Committee shall then have 15 days in which to file a response.

F. After consideration of the record, the recommendation of the Hearing Committee and any statements that may be filed, the Executive Council shall adopt the recommendations of the Hearing Committee unless it determines that:

1. The NASP Principles and/or the procedures herein stated have been incorrectly applied;

2. The findings of fact of the Hearing Committee as stated in the report are not supported by the evidence; or

3. The procedures followed were in violation of the Bylaws of the Association.

G. The Ethical and Professional Standards Committee shall inform the respondent and, at its discretion, may inform the complainant of any final action taken by the Executive Council. The Ethical and Professional Standards Committee shall report to the Delegate Assembly at its next regularly scheduled meeting, in Executive Session, the names of those members who have been allowed to resign or who have been expelled from membership, and the ethical principle(s) involved. Actions involving individuals who hold a certificate issued by the NSPCB will be reported to the national certification board in a timely manner.

H. The Ethical and Professional Standards Committee shall report annually and in confidence to the delegate Assembly and Executive Council, in Executive Session, the names of members who have been expelled from the Association and the ethical principle(s) involved.

I. In severe cases and when the welfare of the public is at stake, and when the Ethical and Professional Standards Committee deems it necessary to maintain the principles of the Association and the profession, it may also notify affiliated state and regional associations and state and local licensing and certification boards of the final disposition of the case. Other interested parties, including the respondent's employer, may be notified of the final action when, in the opinion of the Ethical and Professional Standards Committee, notification is necessary for the protection of the public or the profession.

PROCEDURAL GUIDELINES FOR THE ADJUDICATION OF ETHICAL COMPLAINTS SUMMARIZED IN CHART FORM

A COMPLAINT IS RECEIVED BY THE COMMITTEE.

Is the complaint anonymous?	If so, take no action
Is the complaint oral?	If so, advise only.
Is the complaint about *Standards*?	If so, advise only.
Is the complaint frivolous or vengeful?	If so, consider action against complainant.
Is the ethical complaint about a NASP member or a member of the National Certification system?	If not, advise complainant that the situation is out of NASP jurisdiction

WITHIN 15 DAYS OF THE COMPLAINT:

The committee reviews the written complaint.	
Is there a potential violation of NASP Ethics?	If not, notify complainant and get more information, or stop.
Complainant is advised that an informal investigation will occur, and is asked for a release so that respondent may know who issued the complaint.	
Is the release obtained?	If not, the committee must decide whether to proceed on its own volition.

WITHIN 15 DAYS OF SIGNED RELEASE:

Inform the respondent, describe the complaint and the principles believed to be involved, request cooperation, and send a copy of the Ethics. Ask for a written response.

Attempt to resolve the situation informally, if possible.

IF NO ANSWER WITHIN 30 DAYS

Follow up with another request for a written response, using a certified letter with return receipt requested.

If there is still no reply, or if the respondent refuses to cooperate, note this in the record and inform the respondent that a lack of cooperation could result in expulsion from NASP.

WITHIN 30 DAYS OF THE WRITTEN STATEMENT:

If the facts seem to suggest that a violation may have occurred, is the situation likely to correct itself without further action?	If so, inform all parties and monitor the situation.

WITHIN THE NEXT 60 DAYS:

Contact the state delegate, appoint two impartial NASP members in the respondent's state, and form an Ad Hoc committee.

Ad Hoc Committee receives copies of the original complaint materials, the committee's letter to the respondent, the respondent's written response, and other pertinent material.

Can the situation be settled at the informal level?	If so, contact parties and monitor the situation.
Can the needed information be obtained through correspondence?	If so, the Ad Hoc committee continues to gather the facts.
Does the Ad Hoc committee need for the complainant and the respondent to appear?	If so, arrange for them to appear before the committee.
Does the Ad Hoc Committee have enough information to decide the issues at hand?	If not, begin fact-finding procedures.
Is the Ad Hoc committee unanimous in its decision?	If not, begin formal investigation procedures.

THE COMMITTEE ISSUES A DECISION, WHICH IS BINDING UNLESS OVERTURNED BY A HEARING; SUPERVISION IS REQUIRED:

Order corrective action.	Censure or reprimand.	Require an apology or restitution.	Require probation.	Determine no violation occurred.

WITHIN 5 DAYS:

Notify the respondent of the decision.

WAIT 30 DAYS FOR RESPONDENT TO REQUEST A HEARING:

If there is no request for a hearing, draft a report and advise the Delegate Assembly of the actions of the committee. Make recommendation to National Certification Board if respondent holds national certification.

FORMAL INVESTIGATION PROCEDURES

Follow these steps if:

- The Ad Hoc Committee lacks the data to proceed.
- The Ad Hoc Committee cannot reach a consensus.
- The solutions available to the Ad Hoc Committee are unlikely to resolve the problem.
- The facts, if substantiated, could lead to the expulsion of a NASP member or a member of the NSPCS.

The chairs of the Ethical and Professional Standards Committee, along with the NASP President, appoint members of a fact finding committee. This committee follows the same basic procedures as the Ad Hoc committee.

Does the fact finding committee concur unanimously with the Ad Hoc Committee?

If so, the Ad Hoc Committee decisions are binding unless overturned by a hearing, Executive Council, or Delegate Assembly.

The fact finding committee reaches its own conclusions. The recommendation may include expulsion.

If expulsion is advised, the Ethical and Professional Standards chairs will present the findings to the NASP Executive Council and the Delegate Assembly, with all due consideration for matters of confidentiality.

Is the expulsion recommendation confirmed by a 2/3rd vote of the Executive Council and ratified by a majority of the Delegates?

If not, have the fact finding committee review the situation and consider a lessor penalty.

WITHIN 5 DAYS:

Notify the respondent.

WAIT 30 DAYS FOR RESPONDENT TO REQUEST A HEARING:

If there is no request for a hearing, draft a report and advise the Delegate Assembly and the National Certification Board (if necessary) of the actions of the committee.

CONDUCT OF THE HEARING COMMITTEE

Upon receipt of a written decision by the Ad Hoc or the Fact Finding Committee, a respondent has thirty days in which to ask for a hearing. Should a hearing be requested within the 30 days.

The NASP President selects a panel of 10 impartial NASP members. From this group, the respondent selects 5 to serve on the committee. The President then selects the Chair.

NO LATER THAN 90 DAYS FROM THE DATE OF THE HEARING REQUEST:

The date for the hearing is set.

AT LEAST 30 DAYS BEFORE THE HEARING:

Hearing committee members and respondent receive copies of all relevant documents.

AT THE HEARING:

The Ethical and Professional Standards Committee chair, or designee, presents the facts in the complaint. The respondent has the right to counsel, to present witnesses and documents, and to cross-examine witnesses. The Ethical and Professional Standards Committee may offer rebuttal.

WITHIN 30 DAYS:

The hearing committee issues a report and recommendations to the respondent and the NASP Executive Council.

WITHIN 15 DAYS:

The Ethical and Professional Standards Committee and the respondent may file comments on the hearing committee report.

AT THE NEXT EXECUTIVE COUNCIL MEETING:

Does the NASP Executive Council believe that there is no evidence of ethical misconduct, or that there was a problem with the application of the principles or procedures for investigation?

Is yes, the matter is ended.

The Executive Council adopts the findings and recommendations of the Hearing Committee.

The Ethical and Professional Standards Committee informs the respondent, and has the discretion to inform the complainant or not. The EB/DA is notified of member expelled and the ethical principles involved. The National School Psychology Certification System will be notified if the proceedings involve an NSPCS member.

When the welfare of the public is at stake, NASP may notify other interested parties of the final disposition of the case.

II

Appendix II — Standards for the Provision of School Psychological Services

INTRODUCTION

The *Guidelines for the Provision of School Psychological Services* represent the position of the National Association of School Psychologists (NASP) regarding the delivery of appropriate and comprehensive school psychological services. First written in 1978, revised in 1984, 1992, 1997, and 2000, the *Guidelines* serve as a guide to the organization and delivery of school psychological services at the federal, state, and local levels. The *Guidelines* provide direction to school psychologists, students, and trainers in school psychology, administrators of school psychological services, and consumers of school psychological services regarding excellence in professional school psychology. They also delineate what services might reasonably be expected to be available from most school psychologists and, thus, should help to further define the field. In addition, they are intended to educate the profession and the public regarding appropriate professional practices and, hopefully, will stimulate the continued development of the profession. A principal objective of the *Guidelines* is to inform policy and decision-makers of the major characteristics of comprehensive school psychological services. The first section presents the responsibilities of the individual school psychologist. The second section outlines responsibilities that should be assumed by the unit responsible for providing psychological services within an organization (e.g., school district, community agency) that employs school psychologists. The "unit" is defined as the entity (e.g., the single school psychologist in a small district, a psychological services unit in a large district, a district that contracts with an agency for psychological services) that is responsible for ensuring that schools, students, and families receive comprehensive psychological services.

Not all school psychologists or school psychological service units will be able to meet every standard contained within this document. Nevertheless, it is anticipated that these guidelines will serve as a model of "good practice" for program development and professional practice on a federal, state, and local level. School psychologists will perceive that it is in their own best interest—and that of the agencies, parents, and children they serve—to adhere to and support these *Guidelines*. NASP encourages state and federal legislators, local school boards, and the administrative leaders of federal, state, and local education agencies to support the concepts contained within these *Guidelines*.

NASP acknowledges that the *Guidelines* set requirements for services not presently mandated by federal law or regulation and not always mandated in state laws and administrative rules. Future amendments of such statutes and rules, and the state and local plans resulting from them, should incorporate the suggestions contained in this document. Furthermore, NASP understands that school psychological services are provided within the context of ethical and legal mandates.

Nothing in these *Guidelines* should be construed as superseding such relevant rules and regulations. The *Guidelines* provide flexibility, permitting agencies and professionals to develop procedures, policies, and administrative organizations that meet both the needs of the agency and the professional's desire to operate within recognized professional standards of practice. At the same time, the *Guidelines* have sufficient specificity to insure that services will be provided appropriately and adequately.

PRACTICE GUIDELINES

Practice Guideline 1

School psychologists use a decision-making process in collaboration with other team members to (a) identify academic and behavior problems, (b) collect and analyze information to understand the problems, (c) make decisions about service delivery, and (d) evaluate the outcomes of the service delivery. School psychologists must (a) utilize current professional literature on various aspects of education and child development, (b) translate research into practice through the problem-solving process, and (c) use research design and statistics skills to conduct investigations to develop and facilitate effective services.

1.1 School psychologists define problems in ways that

(a) identify desired goals (e.g., academic/behavioral),

(b) are measurable, (c) are agreed upon by those involved, and (d) are linked appropriately to assessment strategies.

1.2 School psychologists select assessment method(s) that are validated for the problem area under consideration including formal and informal assessment procedures, as appropriate, and include data collected from all settings and persons necessary and appropriate to complete the problem-solving process.

1.3 School psychologists develop and implement effective interventions that are based upon the data collected and related directly to the desired outcomes of those interventions.

1.4 School psychologists use appropriate assessment information to evaluate interventions to determine their effectiveness, their need for modification, or their need for redevelopment. Effectiveness is determined by the relationship between the actual outcome of the intervention and the desired goal articulated in the problem solving process.

1.5 School psychologists apply the problem-solving process to broader research and systems-level problems that result in the identification of factors that influence learning and behavior, the evaluation of the outcomes of classroom, building, and system initiatives and the implementation of decision-making practices designed to meet general public accountability responsibilities.

Practice Guideline 2

School psychologists must have the ability to listen well, participate in discussions, convey information, and work together with others at an individual, group, and systems level. School psychologists must understand the degree to which policy influences systems, systems influence programs, programs and interventions impact consumers, and the methods to facilitate organizational development through strategic change.

2.1 School psychologists use decision-making skills and are proficient in systems consultation to facilitate communication and collaboration with students and school personnel, community professionals, agencies, and families/schools.

2.2 School psychologists participate in public policy discussions and understand the process by which public policy influences systems. By applying decision-making methods to public policy determination, school psychologists facilitate organization development and change.

2.3 School psychologists must be able to present and disseminate information to diverse communities, such as parents, teachers, school boards, policy makers, business leaders, and fellow school psychologists in a variety of contexts, in an organized and meaningful manner.

2.4 School psychologists facilitate the development of healthy learning environments and reduce divisiveness through the use of conflict resolution and negotiation skills.

2.5 School psychologists function as change agents, using their skills in communication, collaboration, and consultation to promote necessary change at the individual student, classroom, building, and district local, state, and federal levels.

Practice Guideline 3

School psychologists (in collaboration with others) develop challenging but achievable cognitive and academic goals for all students, provide information about ways in which students can achieve these goals, and monitor student progress towards these goals.

3.1 School psychologists apply current empirically based theory and knowledge of learning theory and cognitive processes to the development of effective instructional strategies to promote student learning and social and emotional development.

3.2 School psychologists incorporate assessment information to the development of instructional strategies to meet the individual learning needs of children.

3.3 School psychologists use appropriate and applicable assessment techniques to assess progress toward academic goals and assist in revising instructional methodology as necessary.

3.4 School psychologists assist in facilitating and implementing a variety of research-based instructional methods (e.g., cooperative learning, classwide peer tutoring, cognitive strategy training) to enhance learning of students at the individual, group, and systems level.

3.5 School psychologists assist in the design and delivery of curriculum to help students develop behaviors to support effective learning such as study skills, self-regulation and self-monitoring, planning/organization, time management skills, and making choices that maintain physical and mental health.

3.6 School psychologists promote the principles of student-centered learning to help students develop (when appropriate) their individual ability to be self-regulated learners, including the ability to set individual learning goals, design a learning process to achieve those goals, and assess outcomes to determine whether the goals were achieved.

3.7 School psychologists are informed about advances in curriculum and instruction and share this knowledge with educators, parents, and the community at large to promote improvement in instruction, student achievement, and healthy lifestyles.

Practice Guideline 4

School psychologists make decisions based on multiple theoretical perspectives and translate current scientific information to develop effective behavioral, affective, or adaptive goals for all students, facilitate the implementation of programs/interventions to achieve these goals, and monitor progress towards these goals.

4.1 School psychologists use decision-making models (e.g., functional behavioral assessment) that consider the antecedents, consequences, functions, and potential causes of behavioral problems experienced by students with disabilities, which may impair learning or socialization.

4.2 School psychologists identify factors that facilitate the development of optimal learning environments. Optimal learning environments are characterized as settings where all members of the school or agency community treat one another with respect and dignity. Optimal learning environments are characterized as settings where students' basic needs are assured so that learning can occur and health and mental health are systematically evaluated.

4.3 School psychologists facilitate the development and implementation of strategies that result in instructional environments which foster learning and high rates of academic engaged time and reduce the presence of factors that promote alienation and impact learning and behavioral progress.

4.4 School psychologists demonstrate appropriate knowledge of treatment acceptability and treatment integrity by including these principles in the development, implementation, and evaluation of interventions.

4.5 School psychologists apply the principles of generalization and transfer of training in the development of interventions in such a way that, when appropriate, interventions can be implemented across settings— school, home, and community.

4.6 School psychologists develop and implement behavior change programs (individual, group, classroom) that demonstrate the use of alternative, appropriate approaches (e.g., positive reinforcement, social skills training, academic interventions) to student discipline, ecological and behavioral approaches to classroom management, and awareness of classroom climate.

4.7 School psychologists assist parents and other adult caregivers in the development, implementation, and evaluation of behavior change programs in the home in order to facilitate the learning and behavioral growth of their child.

4.8 School psychologists incorporate appropriate strategies when developing and delivering intervention programs to facilitate successful transitions of students from one environment to another environment. These programs include program to program, early childhood to school, school to school, and school to work transitions.

4.9 School psychologists evaluate interventions (learning/ behavioral) for individuals and groups. These include the skills necessary both to evaluate the extent to which the intervention contributed to the outcome and to identify what constitutes a "successful" outcome.

Practice Guideline 5

School psychologists have the sensitivity, knowledge, and skills to work with individuals and groups with a diverse range of strengths and needs from a variety of racial, cultural, ethnic, experiential, and linguistic backgrounds.

5.1 School psychologists develop academic and behavioral interventions. They recognize that interventions most likely to succeed are those which are adapted to the individual needs and characteristics of the student(s) for whom they are being designed.

5.2 School psychologists recognize (in themselves and others and in the techniques and instruments that they use for assessment and intervention) the subtle racial, class, gender, and cultural biases they may bring to their work and the way these biases influence decision-making, instruction, behavior, and long-term outcomes for students. School psychologists work to reduce and eliminate these biases where they occur.

5.3 School psychologists promote practices that help children of all backgrounds feel welcome and appreciated in the school and community.

5.4 School psychologists incorporate their understanding of the influence of culture, background, and individual learning characteristics when designing and implementing interventions to achieve learning and behavioral outcomes.

Practice Guideline 6

School psychologists demonstrate their knowledge of schools (or other institutional settings) as systems when they work with individuals and groups to facilitate structure and public policies that create and maintain schools and other systems as safe, caring, and inviting places for all persons in that system.

6.1 School psychologists use their knowledge of development, learning, family, and school systems to assist schools and communities to develop policies and practices related to discipline, decision-making, instructional support, staff training, school improvement plans, program evaluation, transition plans, grading, retention, and home-school partnerships.

6.2 School psychologists use their knowledge of organizational development and systems theory to assist in creating climates that result in mutual respect and caring for all individuals in the system, an atmosphere of decision-making and collaboration, and a commitment to quality services.

6.3 School psychologists regularly participate in the development of policies and procedures that advocate for effective programs and services.

6.4 School psychologists are actively involved in the development of systems change plans (such as school improvement plans) that directly impact the programs and services available to children, youth, and their families and that directly impact the ways in which school psychologists deliver their services.

6.5 School psychologists assist in the development of policies and procedures to ensure that schools are safe and violence free. School psychologists participate in the implementation and evaluation of programs that result in safe and violence free schools and communities.

6.6 School psychologists are actively involved in public policy at the local, state, and federal levels as a means of creating systems of effective educational services.

6.7 School psychologists are aware of funding mechanisms that are available to school and communities that support health and mental health services. School psychologists participate in the development of funding strategies to assure that needed services are available to students and their families.

Practice Guideline 7

School psychologists shall appropriately utilize prevention, health promotion, and crisis intervention methods based on knowledge of child development, psychopathology, diversity, social stressors, change, and systems.

7.1 School psychologists shall apply knowledge of child development, psychopathology, diversity, social stressors, change, and systems to the identification and recognition of behaviors that are precursors to school dropouts or the development of mental health disorders such as conduct disorders or internalizing disorders.

7.2 School psychologists shall provide direct counseling and indirect interventions through consultation for students with disabilities and suspected disabilities who experience mental health problems that impair learning and/or socialization.

7.3 School psychologists shall develop, implement, and evaluate prevention and intervention programs based on recognized factors that are precursors to development of severe learning and behavioral problems.

7.4 School psychologists shall collaborate with school personnel, parents, students, and the community to provide competent mental health support during and after crises (for example, suicide, death, natural disasters, murder, bombs or bomb threats, extraordinary violence, and sexual harassment).

7.5 School psychologists promote wellness by (a) collaborating with other health care professionals to provide a basic knowledge of behaviors that lead to good health for children; (b) facilitating environmental changes conducive to good health and adjustment of children; and (c) accessing resources to address a wide variety of behavioral, learning, mental, and physical needs.

Practice Guideline 8

School psychologists have knowledge of family influences that affect students' wellness, learning, and achievement and are involved in public policy that promotes partnerships between parents, educators, and the community.

8.1 School psychologists design and implement and evaluate programs to promote school-family partnerships for the purpose of enhancing academic and behavioral goals for students. These might include (but are not limited to) developing parent education programs, establishing drop-in centers for parents, establishing homework hotlines, or providing other supports for parents to help them parent successfully and to help them enhance the academic and psychological development of their children.

8.2 School psychologists help parents feel comfortable participating in school functions or activities. These might include providing support for them when participating on special education and I.E.P. teams, encouraging parental involvement in school-wide committees such as school improvement teams, *and* facilitating home-school communication when problems arise and includes assisting parents in accessing community-based services for their family.

8.3 School psychologists educate the school community regarding the influence of family involvement on school achievement and advocate for parent involvement in school governance and policy development whenever feasible.

8.4 School psychologists help create linkages between schools, families, and community agencies and help coordinate services when programming for children involves multiple agencies.

8.5 School psychologists are knowledgeable about the local system of care and related community services available to support students and their families.

8.6 School psychologists work with parent organizations to promote public policy that empowers parents to be competent consumers of the local system of services.

8.7 School psychologists are active participants in public policy by serving on committees, participating in work groups and task forces, and in responding to proposed legislation and rules.

GUIDELINES FOR THE ORGANIZATION AND OPERATION OF THE UNIT

Unit Guideline 1: Organization of Service Delivery

School psychological services are provided in a coordinated, organized fashion and are delivered in a manner that ensures the provision of a comprehensive and seamless continuum of services. Services are delivered following the completion of a strategic planning process based on the needs of the consumers and an empirically supported program evaluation model.

1.1 School psychological services are available and accessible to all students and clients served by the agency and are in proportion to the needs of the client.

1.2 School psychological services are available to all students on an equal basis and are not determined by a specific funding source. Services are provided to students based on their need, not based on their eligibility to generate specific funding.

1.3 School psychological services are integrated with other school and community services. Students and their families should not be responsible for the integration of these services based on funding, setting, or program location. Therefore, school psychological and mental health services are provided through a "seamless" system of care.

1.4 School psychological services units ensure that the services delivered by the unit and provided directly by the school psychologist to consumers are based on a strategic plan. The plan is developed based on the collective needs of the district and community with the primary focus being the specific needs of the population served by individual practitioners.

1.5 School psychological services units conduct regular evaluations of the collective services provided by the unit as well as those services provided by individual practitioners. The evaluation process focuses on both the nature and extent of the services provided (process) and the student/family focused outcomes of those services (product).

1.6 The school psychological services unit provides a range of services to their clients. These consist of direct and indirect services that require involvement with the entire educational system as well as other services systems in the community. The consumers of and participants in these services include: students, teachers, administrators, other school personnel, families, caretakers, other community and regional agencies, and resources that support the educational process.

Unit Guideline 2: Climate

It is the responsibility of the unit to create a climate in which school psychological services can be delivered with mutual respect for all parties. Employees of the unit have the freedom to advocate for the services that are necessary to meet the needs of consumers and are free from artificial, administrative, or political constraints that might hinder or alter the provision of appropriate services.

2.1 Providers of school psychological services maintain a cooperative relationship with colleagues and co-workers in the best mutual interests of clients. Conflicts are resolved in a professional manner.

2.2 The potential negative impact of administrative constraints on effective services is kept to a minimum. The school psychologist will advocate for administrative policies that support the school psychologist in seeking the needed services and will provide mechanisms for referral and consultation regarding unmet health and mental health needs.

2.3 Members of the unit advocate in a professional manner for the most appropriate services for their clients without fear of reprisal from supervisors or administrators.

2.4 School psychological services units are aware of the impact of work environment on the job satisfaction of unit employees and on the quality of services provided to consumers. Measures of work climate are included when the unit conducts self-evaluations.

2.5 School psychological services units promote and advocate for balance between professional and personal lives of unit employees. Unit supervisors monitor work and stress levels of employees and take steps to reduce pressure when the well-being of the employee is at risk. Supervisors are available to employees to problem solve when personal factors may adversely affect job performance and when job expectations may adversely affect the personal life of the employee.

Unit Guideline 3: Physical, Personnel, and Fiscal Support Systems

School psychological services units ensure that (a) an adequate recruitment and retention plan for employees exists to ensure adequate personnel to meet the needs of the system; (b) all sources of funding, both public and private, are used and maximized to ensure the fiscal support necessary to provide adequate services; (c) all employees have adequate technology, clerical services, and a physical work environment; and (d) employees have adequate personnel benefits necessary to support the work of the unit including continuing educational professional development.

3.1 School psychological services units assume the professional responsibility and accountability for services provided through the recruitment of qualified and diverse staff and the assurance that staff members function only in their areas of competency.

3.2 School psychological services units support recruitment and retention of qualified staff by advocating for appropriate ratios of school psychology services staff to students. The ratio of staff to students should not exceed one staff person for every 1000 students.

3.3 School psychological services units utilize advanced technologies (e.g., computer-assisted) in time management, communication systems, data management systems, and service delivery.

3.4 School psychological services units have access to adequate clerical assistance, appropriate professional work materials, sufficient office and work space, adequate technology support (e.g., e-mail, computer) and general working conditions that enhance the delivery of effective services. Included are test materials, access to private telephone and office, secretarial services, therapeutic aids, and professional literature.

Unit Guideline 4: Communication and Technology

The school psychological services unit ensures that policies and practices exist which result in positive,

proactive communication and technology systems both within the unit, its central organizational structure, and those organizational structures with which the unit interacts.

4.1 School psychological services units provide opportunities for members of the unit to communicate with each other about issues of mutual professional interest on a regular basis.

4.2 School psychological services units maintain a formal system of communication channels with other units within the parent organization and between the unit and other agencies with whom it interacts on behalf of clients. The unit engages in decision-making and strategic planning with other units and agencies in order to ensure optimal services are provided to mutual clients.

4.3 School psychological services units ensure that staff members have access to the technology necessary to perform their jobs adequately and to maintain communication with service providers and clients within and outside the unit. The requirement for confidentiality is respected, with adequate resources available to service providers to ensure confidential communication.

4.4 School psychological services units' policy on student records is consistent with state and federal rules and laws and ensures the protection of the confidentiality of the student and his or her family. The policy specifies the types of data developed by the school psychologist that are classified as school or pupil records. The policy gives clear guidance regarding which documents belong (consistent with FERPA or similar state/court regulations) to the school and the student/guardian and which documents (such as clinical notes) are the personal property of the school psychologist.

4.5 Parents may inspect and review any personally identifiable data relating to their children that were collected, maintained, or used in his/her evaluation. Although test protocols are part of the student's record, school psychologists protect test security and observe copyright restrictions. Release of records and protocols is done consistent with state/federal regulations.

Unit Guideline 5: Supervision

The school psychological services unit ensures that all personnel have levels and types of supervision adequate to ensure the provision of effective and accountable services. Supervision is provided through an ongoing, positive, systematic, collaborative process between the school psychologist and the school psychology supervisor. This process focuses on promoting professional growth and exemplary professional practice leading to improved performance by all concerned including the school psychologist, supervisor, students, and the entire school community.

5.1 A supervisor of a school psychological services unit holds or meets the criteria for the Nationally Certified School Psychologist (NCSP) credential and has been identified by an employing agency and/or school psychological services unit as a supervisor responsible for school psychology services in the agency or unit. Supervisors hold a state school psychologist credential and have a minimum of three years of experience as a practicing school psychologist. Training and/or experience in the supervision of school personnel are desirable.

5.2 When supervision is required for interns, beginning school psychologists, or others for whom supervision is necessary, such supervision will be provided at least 2 hours per week for persons employed full-time.

5.3 Supervisors lead school psychological services units in developing, implementing, and evaluating a coordinated plan for accountability and evaluation of all services provided in order to maintain the highest level of effectiveness. Such plans include specific, measurable objectives pertaining to the planned effects of services. Evaluation is both formative and summative. Supervisors provide leadership by promotion of innovative service delivery systems that reflect best practices in the field of school psychology.

5.4 Supervisors lead school psychological services units in developing, implementing, and evaluating a coordinated plan for accountability and evaluation of all services provided by individual staff members and by the unit as a whole in order to maintain the highest level of services. Such plans include specific, measurable objectives pertaining to the planned effects of services on all relevant elements of the system and the students it serves. Evaluation is both formative and summative.

5.5 The school psychological services unit continues to provide supervision or peer review for its school psychologists after their first year of employment to ensure continued professional growth and development and support for complex or difficult cases.

5.6 Supervisors coordinate the activities of the school psychological services unit with other professional services units through review and discussion of 1) intervention planning and outcomes; 2) comprehensive, systemic procedures and special concerns; and 3) discrepancies among views of various professional service providers or employing agencies.

5.7 Supervisors ensure that practica and internship experiences occur under conditions of appropriate supervision including 1) access to professional school psychologists who will serve as appropriate role models, 2) provision of supervision by an appropriately credentialed school psychologist, and 3) provision of supervision within the guidelines of the training institution and NASP *Standards for Training and Field Placement Programs in School Psychology.*

5.8 Supervisors provide professional leadership through participation in school psychology professional organizations and active involvement in local, state and federal public policy development.

Unit Guideline 6: Professional Development and Recognition Systems

Individual school psychologists and the school psychological services unit develop professional development plans annually. The school psychological services unit ensures that continuing professional development of its personnel is both adequate for and relevant to the service delivery priorities of the unit and that recognition systems exist to reflect the continuum of professional development activities embraced by its personnel.

6.1 All school psychologists within the unit actively participate in activities designed to continue, enhance, and upgrade their professional training and skills to help ensure quality service provision.

6.2 The school psychological services unit provides support (e.g., funding, time, supervision) to ensure that school psychologists have sufficient access to continuing professional development and supervision activities at a minimal level necessary to maintain the NCSP.

6.3 School psychologists develop a formal professional development plan and update this plan annually. The goals, objectives, and activities of the plan are influenced by the following factors in order of priority: (1) the most pressing needs of the population and community served; (2) the knowledge, skills, and abilities required to implement initiatives sponsored by the unit; and (3) the individual interest areas of the school psychologists employed by the unit.

6.4 School psychologists seek and use appropriate types and levels of supervision as they acquire new knowledge, skills, and abilities through the professional development process.

6.5 School psychologists document the type, level, and intensity of their professional development activities. The school psychological services unit provides technology and personnel resources to assist in these activities.

6.6 School psychologists individually seek appropriate levels of advanced recognition (e.g., advanced degrees, levels established by district, state, or national recognition bodies) to reflect on-going professional development.

6.7 School psychological services units provide levels of recognition (e.g., salary, opportunity to use new skills) within the unit that reflect the professional development of the school psychologists in the unit.

Unit Guideline 7: Contracted/Independent Provider Services

The school psychological services unit is responsible for providing psychological services. These services can come from district employed school psychologists, from psychologists employed in independent practice, or through other agencies. Regardless of whether personnel are employed or contracted, it is the responsibility of the unit to ensure the same level and quality of services as those provided by personnel from within the unit.

7.1 Contractual school psychological services encompass the same comprehensive continuum of services as is provided by regularly employed school psychologists. These services include opportunities for follow-up and continuing consultation appropriate to the needs of the student. Individual contracts for services may be limited as long as the school psychological services unit ensures comprehensive services overall.

7.2 Contractual school psychological services are not used as a means to decrease the amount and quality of school psychological services provided by an employing agency. They may be used to augment and enhance programs, as in the case of retaining needed expertise, to coordinate with other community health services, and to assure that services are available to students and their families.

7.3 Contracted services may be used as a mechanism to maximize available resources. However, any such models of service must provide comprehensive psychological services and must assure quality services of equal or greater value when compared to services provided by school-based personnel.

7.4 Contractual school psychological services are provided in a manner that protects the due process rights of students and their parents as defined by state and federal laws and regulations.

7.5 Psychologists providing contractual school psychological services provide those services in a manner consistent with these Guidelines, NASP *Principles for Professional Ethics*, and other relevant professional guidelines and standards.

7.6 Persons providing contractual psychological services are fully credentialed school psychologists as defined by these or other (e.g., state certification boards) recognized standards. In specific instances, however, services by credentialed psychologists in other specialty areas (e.g., clinical, industrial/organizational, neuropsychology) might be used to supplement school psychological services and should be coordinated with school psychological services.

7.7 Psychologists providing contractual school psychological services will require regular evaluation of the quality of services provided as well as the continued need for contracted services.

7.8 A credentialed school psychologist who has completed a school psychology training program that meets the criteria specified in the NASP *Standards for Training and Field Placement Programs in School Psychology* and two full-time years (one of which may be internship) of satisfactory, properly supervised experience is considered qualified for personally supervised, independent practice with peer review, regardless of work setting. (NOTE: "Independent practice" as used in this paragraph refers to autonomous functioning within the employing school or agency. Contrast this with the licensure rules of various states for "private practice.")

7.9 A credentialed school psychologist or an organized group of credentialed school psychologists may engage in independent practice outside of a school agency or unit pursuant to existing rules regarding the independent practice of psychology within a given state. Units will support public policy that will provide for the independent practice of school psychology.

III

Appendix III — Standards for Training and Field Placement Programs in School Psychology

The mission of the National Association of School Psychologists (NASP) is to promote educationally and psychologically healthy environments for all children and youth by implementing research-based, effective programs that prevent problems, enhance independence, and promote optimal learning. This is accomplished through state-of-the-art research and training, advocacy, ongoing program evaluation, and caring professional service. The NASP *Standards for Training and Field Placement Programs in School Psychology* contribute to the development of effective services through the identification of critical training experiences and competencies needed by candidates preparing for careers in school psychology. These *Standards* serve to guide the design of school psychology graduate education by providing a basis for program evaluation and a foundation for the recognition of programs that meet national quality standards through the NASP program approval process.

I. PROGRAM CONTEXT/STRUCTURE

School psychology training is delivered within a context of program values and clearly articulated training philosophy/mission, goals, and objectives. Training includes a comprehensive, integrated program of study delivered by qualified faculty, as well as substantial supervised field experiences necessary for the preparation of competent school psychologists whose services positively impact children, youth, families, and other consumers.

1.1 The program provides to all candidates a clearly articulated training philosophy/mission, goals, and objectives. An integrated and sequential program of study and supervised practice clearly identified as being in school psychology and consistent with the program's philosophy/mission, goals, and objectives are provided to all candidates.

1.2 A commitment to understanding and responding to human diversity is articulated in the program's philosophy/mission goals, and objectives and practiced throughout all aspects of the program, including admissions, faculty, coursework, practica, and internship experiences. Human diversity is recognized as a strength that is valued and respected.

1.3 Candidates have opportunities to develop an affiliation with colleagues, faculty, and the profession through a continuous full-time residency or alternative planned experiences.

1.4 The program possesses at least three full-time equivalent faculty. At least two faculty members (including the program administrator) shall hold the doctorate with specialization in school psychology and be actively engaged in school psychology as a profession (e.g., by possessing state and/or national credentials, having experience as a school psychologist, participating in professional school psychology associations, and/or contributing to research, scholarly publications, and presentations in the field). Other program faculty possess the doctoral degree in psychology, education, or a closely related discipline with a specialization supportive of their training responsibilities in the school psychology program.

1.5 The program provides, collaborates in, or contributes to continuing professional development opportunities for practicing school psychologists based on the needs of practitioners.

Requirements for Specialist-Level Programs Only (1.6-1.7)

1.6 Specialist-level programs consist of a minimum of three years of full-time study or the equivalent at the graduate level. The program shall include at least 60 graduate semester hours or the equivalent, at least 54 hours of which are exclusive of credit for the supervised internship experience. Institutional documentation of program completion shall be provided.

1.7 Specialist-level programs include a minimum of one academic year of supervised internship experience, consisting of a minimum of 1200 clock hours.

Requirements for Doctoral Programs Only (1.8-1.10)

1.8 Doctoral programs provide greater depth in multiple domains of school psychology training and practice as specified in these standards (see Standard II). (Note: Programs are encouraged to provide opportunities for doctoral study for practicing school psychologists and, to the greatest extent possible, credit for prior training.)

1.9 Doctoral programs consist of a minimum of four years of full-time study or the equivalent at the graduate level. The program shall include a minimum of 90 graduate semester hours or the equivalent, at least 78 of which are exclusive of credit for the doctoral supervised internship experience and any terminal doctoral project (e.g., dissertation) and shall culminate in institutional documentation.

1.10 Doctoral programs include a minimum of one academic year of doctoral supervised internship experience, consisting of a minimum of 1500 clock hours.

II. DOMAINS OF SCHOOL PSYCHOLOGY TRAINING AND PRACTICE

School psychology candidates demonstrate entry-level competency in each of the following domains of professional practice. Competency requires both knowledge and skills. School psychology programs ensure that candidates have a foundation in the knowledge base for psychology and education, including theories, models, empirical findings, and techniques in each domain. School psychology programs ensure that candidates demonstrate the professional skills necessary to deliver effective services that result in positive outcomes in each domain. The domains below are not mutually exclusive and should be fully integrated into graduate level curricula, practica, and internship. Domains are more fully illustrated on page 1652.

2.1 **Data-Based Decision-Making and Accountability:** School psychologists have knowledge of varied models and methods of assessment that yield information useful in identifying strengths and needs, in understanding problems, and in measuring progress and accomplishments. School psychologists use such models and methods as part of a systematic process to collect data and other information, translate assessment results into empirically-based decisions about service delivery, and evaluate the outcomes of services. Data-based decision-making permeates every aspect of professional practice.

2.2 **Consultation and Collaboration:** School psychologists have knowledge of behavioral, mental health, collaborative, and/or other consultation models and methods and of their application to particular situations. School psychologists collaborate effectively with others in planning and decision-making processes at the individual, group, and system levels.

2.3 **Effective Instruction and Development of Cognitive/ Academic Skills:** School psychologists have knowledge of human learning processes, techniques to assess these processes, and direct and indirect services applicable to the development of cognitive and academic skills. School psychologists, in collaboration with others, develop appropriate cognitive and academic goals for students with different abilities, disabilities, strengths, and needs; implement interventions to achieve those goals; and evaluate the effectiveness of interventions. Such interventions include, but are not limited to, instructional interventions and consultation.

2.4 **Socialization and Development of Life Skills:** School psychologists have knowledge of human developmental processes, techniques to assess these processes, and direct and indirect services applicable to the development of behavioral, affective, adaptive, and social skills. School psychologists, in collaboration with others, develop appropriate behavioral, affective, adaptive, and social goals for students of varying abilities, disabilities, strengths, and needs; implement interventions to achieve those goals; and evaluate the effectiveness of interventions. Such interventions include, but are not limited to, consultation, behavioral assessment/intervention, and counseling.

2.5 **Student Diversity in Development and Learning:** School psychologists have knowledge of individual differences, abilities, and disabilities and of the potential influence of biological, social, cultural, ethnic, experiential, socioeconomic, gender-related, and linguistic factors in development and learning. School psychologists demonstrate the sensitivity and skills needed to work with individuals of diverse characteristics and to implement strategies selected and/or adapted based on individual characteristics, strengths, and needs.

2.6 **School and Systems Organization, Policy Development, and Climate:** School psychologists have knowledge of general education, special education, and other educational and related services. They understand schools and other settings as systems. School psychologists work with individuals and groups to facilitate policies and practices that create and maintain safe, supportive, and effective learning environments for children and others.

2.7 **Prevention, Crisis Intervention, and Mental Health:** School psychologists have knowledge of human development and psychopathology and of associated biological, cultural, and social influences on human behavior. School psychologists provide or contribute to prevention and intervention programs that promote the mental health and physical well-being of students.

2.8 **Home/School/Community Collaboration:** School psychologists have knowledge of family systems, including family strengths and influences on student development, learning, and behavior, and of methods to involve families in education and service delivery. School psychologists work effectively with families, educators, and others in the community to promote and provide comprehensive services to children and families.

2.9 **Research and Program Evaluation:** School psychologists have knowledge of research, statistics, and evaluation methods. School psychologists evaluate research, translate research into practice, and understand research design and statistics in sufficient depth to plan and conduct investigations and program evaluations for improvement of services.

2.10 **School Psychology Practice and Development:** School psychologists have knowledge of the history and foundations of their profession; of various service models and methods; of public policy development applicable to services to children and families; and of ethical, professional, and legal standards. School psychologists practice in ways that are consistent with applicable standards, are involved in their profession, and have the knowledge and skills needed to acquire career-long professional development.

2.11 **Information Technology:** School psychologists have knowledge of information sources and technology relevant to their work. School psychologists access, evaluate, and utilize information sources and technology in ways that safeguard or enhance the quality of services.

III. FIELD EXPERIENCES/INTERNSHIP

School psychology candidates have the opportunities to demonstrate, under conditions of appropriate supervision, their ability to apply their knowledge, to develop specific skills needed for effective school psychological service delivery, and to integrate competencies that address the domains of professional preparation and practice outlined in these standards and the goals and objectives of their training program.

3.1 Supervised practica and internship experiences are completed for academic credit or are otherwise documented by the institution. Closely supervised practica experiences that include the development and evaluation of specific skills are distinct from and precede culminating internship experiences that require the integration and application of the full range of school psychology competencies and domains.

3.2 The internship is a collaboration between the training program and field site that assures the completion of activities consistent with the goals of the training program. A written plan specifies the responsibilities of the training program and internship site in providing supervision, support, and both formative and summative performance-based evaluation of intern performance.

3.3 The internship is completed on a full-time basis over one year or on a half-time basis over two consecutive years. At least 600 hours of the internship are completed in a school setting. (Note: Doctoral candidates who have met the school-based internship requirement through a specialist-level internship or equivalent experience may complete the doctoral internship in a non-school setting if consistent with program values and goals. Program policy shall specifically define equivalent experiences and explain their acceptance with regard to doctoral internship requirements.)

3.4 Interns receive an average of at least two hours of field-based supervision per full-time week from an appropriately credentialed school psychologist or, for non-school settings, a psychologist appropriately credentialed for the internship setting.

3.5 The internship placement agency provides appropriate support for the internship experience including: (a) a written agreement specifying the period of appointment and any terms of compensation; (b) a schedule of appointments, expense reimbursement, a safe and secure work environment, adequate office space, and support services consistent with that afforded agency school psychologists; (c) provision for participation in continuing professional development activities; (d) release time for internship supervision; and (e) a commitment to the internship as a diversified training experience.

IV. PERFORMANCE-BASED PROGRAM ASSESSMENT AND ACCOUNTABILITY

School psychology training programs employ systematic, valid evaluation of candidates, coursework, practica, internship, faculty, supervisors, and resources and use the resulting information to monitor and improve program quality. A key aspect of program accountability is the assessment of the knowledge and capabilities of school psychology candidates and of the positive impact that interns and graduates have on services to children, youth, families, and other consumers. Further guidance regarding the assessment of candidate performance is provided in a companion NASP document, *Guidelines for Performance-based Assessment and Program Accountability and Development.*

4.1 Systematic, valid procedures are used to evaluate and improve the quality of the program. Different sources of process and performance information (e.g., instructional evaluation, performance portfolios, field supervisor evaluations, candidate/ graduate performance on licensing/certification examinations, alumni follow-ups) are used, as appropriate, to evaluate and improve components of the program.

4.2 The program applies specific published criteria, both objective and qualitative, for the assessment and admission of candidates to the program at each level and for candidate retention and progression in the program. The criteria address the academic and professional competencies, as well as the professional work characteristics needed for effective practice as a school psychologist (including respect for human diversity, communication skills, effective interpersonal relations, ethical responsibility, adaptability, and initiative/ dependability).

4.3 The program employs a systematic, valid process to ensure that all candidates, prior to the conclusion of the internship experience, are able to integrate domains of knowledge and apply professional skills in delivering a comprehensive range of services evidenced by measurable positive impact on children, youth, families, and other consumers.

V. PROGRAM SUPPORT/RESOURCES

Note: Programs in units/institutions accredited or undergoing review by the National Council for Accreditation of Teacher Education (NCATE) do not need to provide a response to the standards in Section V as part of the NASP program review process. Adequate resources are available to support the training program and its faculty and candidates. Such resources are needed to assure accomplishment of program goals and objectives and attainment of competencies needed for effective school psychology practice that positively impact children, families, and other consumers.

5.1 Faculty loads take into account program administration, supervision, scholarship, service, and assessment associated with graduate level school psychology faculty responsibilities. Faculty teaching and supervision loads are no greater than 75% of that typically assigned to those teaching primarily undergraduate courses. The program administrator receives at least 25% reassigned time for administrative duties.

5.2 In order to ensure sufficient candidate access to program faculty instructors, mentors, and supervisors, the program maintains a no greater than 1:10 FTE faculty to FTE student ratio in the overall program, as well as in practica and internship.

5.3 Program faculty receive support for ongoing learning and professional experiences relevant to assigned training responsibilities. This includes support for continuing professional development in school psychology, involvement with professional organizations, and similar involvement in the profession, research, and related activities important to maintaining and enhancing knowledge, skills, and contributions to the profession.

5.4 Candidates receive ongoing support during training that includes faculty advisement and supervision, the availability of university and/or program support services, and opportunities for funding and/or related assistance needed to attain their educational goals (e.g., assistantships, fellowships, traineeships, internship stipends).

5.5 Adequate physical resources are available to support faculty and candidates in school psychology. These resources include adequate office space, clinical and laboratory facilities, data and information processing facilities and equipment, instructional resources, audiovisual materials, and technology needed for effective instruction.

5.6 The program provides reasonable accommodations for the special needs of candidates and faculty with disabilities.

5.7 Adequate library and information resources and services are available to support instruction, independent study, and research relevant to school psychology. Resources include access to major publications and periodicals in the field.

5.8 The program meets established approval standards for the appropriate state credentialing body(s) and is located in a unit/institution that meets regional accreditation standards.

EXPANDED DESCRIPTIONS OF DOMAINS OF SCHOOL PSYCHOLOGY TRAINING AND PRACTICE

The expanded descriptions of the "Domains of School Psychology Training and Practice" are adapted from pages 7-9 of Ysseldyke, J., Dawson, P., Lehr, C., Reschly, D., Reynolds, M. & Telzrow, C. (1997). *School Psychology: A Blueprint for Training and Practice II*. Bethesda, MD: National Association of School Psychologists. Adapted with permission of copyright holder.

2.1 Data-Based Decision-Making and Accountability: School psychologists have knowledge of varied models and methods of assessment that yield information useful in identifying strengths and needs, in understanding problems, and in measuring progress and accomplishments. School psychologists use such models and methods as part of a systematic process to collect data and other information, translate assessment results into empirically-based decisions about service delivery, and evaluate the outcomes of services. Data-based decision-making permeates every aspect of professional practice.

EXPANDED DESCRIPTION: Data-based decision-making and accountability should be the organizing theme of and permeate school psychology training and practice. School psychologists have knowledge of effective data-based decision-making and problem-solving processes. They systematically collect information to identify and define strengths and needs and use the information to make decisions, plan services, evaluate the outcomes of services, and facilitate accountability for the decisions that have been made. School psychologists collect considerable data on individual students, educational and health programs, classroom environments, and other aspects of schools and other agencies to evaluate problems and needs, assess current status, and measure the effects of a decision-making process.

School psychologists have knowledge of varied models and methods of assessment, or a process of testing, observing, and interviewing, to collect data for making decisions. They are well-versed in a variety of psychological and educational assessment methods validated for the problem area under consideration, including formal and informal test administration, behavioral assessment, curriculum-based measurement, interviews, and/or ecological or environmental assessment. They collect data about environments, including school and home, as well as cognitive, emotional, social, and behavioral factors that have a significant impact on children's school achievement and personal competence. School psychologists evaluate the components of environments that facilitate or impede learning or behavioral changes for children and identify how environmental factors and children's characteristics interact to affect academic and social/behavioral outcomes. They have knowledge of methods to link assessment results with intervention and use data to design and implement effective direct and indirect intervention services that promote children's competence and prevent difficulties or disabilities. They evaluate the outcomes of intervention services, with effectiveness determined by the relationship between the actual outcome of the interventions and the desired goals articulated in the decision-making process.

School psychologists assist school and other agency administrators with assessment and data-based decision-making designed to meet accountability responsibilities. School psychologists apply their knowledge of decision-making and problem-solving processes to broader research and systems-level problems that result in (a) identification of factors that influence learning and behavior; (b) evaluation of the outcomes of classroom, building, and system initiatives; and (c) implementation of problem solving practices designed to meet general public accountability responsibilities.

2.2 Consultation and Collaboration: School psychologists have knowledge of behavioral, mental health, collaborative, and/or other consultation models and methods and of their application to particular situations. School psychologists collaborate effectively with others in planning and decision-making processes at the individual, group, and system levels.

EXPANDED DESCRIPTION: School psychologists have knowledge of and employ effective behavioral, mental health, collaborative, and/or other consultation approaches. They apply their knowledge of consultation and collaboration in numerous situations in their practice. School psychologists function as change agents, using their knowledge and skills in consultation and collaboration to promote change at the levels of the individual student, classroom, building, district, and/or other agency. School psychologists use consultation and collaboration to facilitate development of harmonious environments in schools and other settings, to reduce the divisiveness and disenfranchisement often found in troubled schools, and to promote the kinds of principles necessary to achieve consensus.

School psychologists have the knowledge and skills necessary to facilitate communication and collaboration with children and youth and among teams of school personnel, families, community professionals, and others. School psychologists have positive interpersonal skills and listen, adapt, address ambiguity, and are patient in difficult situations. They have knowledge of the important features of collaboration and use effective collaboration skills with individuals of diverse backgrounds and characteristics. In addition to their knowledge and skills in communication and collaboration, school psychologists clearly present and disseminate information to diverse audiences, such as parents, teachers, school boards, policy makers, community leaders, colleagues, and others in a variety of contexts.

2.3 **Effective Instruction and Development of Cognitive/Academic Skills: School psychologists have knowledge of human learning processes, techniques to assess these processes, and direct and indirect services applicable to the development of cognitive and academic skills. School psychologists, in collaboration with others, develop appropriate cognitive and academic goals for students with different abilities, disabilities, strengths, and needs; implement interventions to achieve those goals; and evaluate the effectiveness of interventions. Such interventions include, but are not limited to, instructional interventions and consultation.**

EXPANDED DESCRIPTION: School psychologists have knowledge of learning theory and cognitive strategies and their application to the development of effective instructional strategies to promote student learning. They have knowledge of the cognitive and academic skills of students with different abilities, disabilities, strengths, and needs and of assessment and instructional strategies for use with students with diverse backgrounds and experiences. School psychologists are knowledgeable about principles of student-centered learning and use the principles to help students develop their abilities to be self-regulated learners. They assist children with developing behaviors to support effective learning, such as study skills, self-monitoring, planning/organization, and time management skills.

School psychologists have a current, professional knowledge base of empirically-demonstrated components of effective instruction and alternative instructional methodologies for students with diverse strengths and needs. They assist in implementing a variety of assessment techniques and instructional methods to enhance the learning of students at the individual, group, and systems levels. School psychologists, in collaboration with others, set individual learning goals, design a learning process to achieve those goals, and assess outcomes to determine whether the goals are achieved. School psychologists maintain current information and research about advances in curriculum and instruction and share this information and research with educators, parents, and the community at large to promote improvement in instruction and student achievement.

School psychologists help schools and other agencies develop appropriate cognitive and academic goals for all children, with variations in standards and expectations for individual students and alternative ways to monitor and assess individual student progress toward the accomplishment of goals and standards. They also assist State Education Agency and Local Education Agency personnel who design state and local accountability systems. School psychologists link assessment information to the development of instructional strategies in order to meet the individual learning needs of children. They have knowledge of and use appropriate assessment techniques to assess progress toward academic goals and assist in revising instructional methodology as necessary. They apply techniques to evaluate the extent to which the instructional or intervention strategy contributed to the outcome and to identify the factors that constitute a "successful" outcome. School psychologists are knowledgeable about and routinely use methods to assess treatment integrity (the extent to which treatment or programs are being implemented in the ways in which they were intended).

2.4 Socialization and Development of Life Skills: School psychologists have knowledge of human developmental processes, techniques to assess these processes, and direct and indirect services applicable to the development of behavioral, affective, adaptive, and social skills. School psychologists, in collaboration with others, develop appropriate behavioral, affective, adaptive, and social goals for students of varying abilities, disabilities, strengths, and needs; implement interventions to achieve those goals; and evaluate the effectiveness of interventions. Such interventions include, but are not limited to, consultation, behavioral assessment/intervention, and counseling.

EXPANDED DESCRIPTION: School psychologists have a current professional knowledge base about development processes in behavioral, social, affective, and adaptive domains. They are knowledgeable about sound principles of assessment and behavior change within these domains and apply these principles through the provision of effective consultation, behavioral assessment, intervention, and counseling services. School psychologists have knowledge of the socialization and life skills of children with different abilities, disabilities, strengths, and needs and knowledge of direct and indirect intervention strategies for use with children with diverse backgrounds and experiences.

School psychologists have knowledge and skills in consultation, behavior management, and counseling strategies that enhance appropriate student behavior. They develop methodologies, such as conflict resolution and social problem-solving/decision-making approaches, that will assist teachers and families in teaching pro-social behavior. School psychologists apply the principles of generalization and transfer of training to the development of interventions in such a way that, when appropriate, interventions can be implemented across settings (e.g., school, home, community). School psychologists provide leadership in creating environments for children that reduce alienation and foster the expression of appropriate behavior, as well as environments in which all members treat one another with respect and dignity. They assist teachers, families, and others with helping children become responsible for their own behavior. School psychologists assist parents and other adult caregivers with the development and implementation of behavior change programs in the home in order to facilitate the learning and development of their children.

School psychologists have knowledge of and facilitate the development and implementation of strategies that result in optimal instructional environments, foster learning and high rates of students' academic engaged time, and reduce the presence of factors that promote alienation and have a negative impact on children's learning and behavioral progress. School psychologists have knowledge of research on classroom climate and of ecological and behavioral approaches to classroom management. They use ecological and behavioral approaches to develop and implement behavior change programs (individual, group, classroom, etc.). They incorporate appropriate strategies when developing intervention programs to facilitate successful transitions of students from one environment to another environment. These intervention programs include program to program, early childhood to school, and school to work transitions.

School psychologists link assessment information to the development of strategies in order to address individual behavioral, affective, adaptive, and social goals for children. They have knowledge of and use appropriate assessment techniques to assess progress toward goals and assist in revising intervention strategies as necessary. They apply techniques to evaluate the extent to which the intervention strategy contributed to the outcome and to identify the factors that constitute a "successful" outcome. School psychologists are knowledgeable about and assess treatment integrity (the extent to which treatment or programs are being implemented in the ways in which they were intended).

2.5 **Student Diversity in Development and Learning: School psychologists have knowledge of individual differences, abilities, and disabilities and of the potential influence of biological, social, cultural, ethnic, experiential, socioeconomic, gender-related, and linguistic factors in development and learning. School psychologists demonstrate the sensitivity and skills needed to work with individuals of diverse characteristics and to implement strategies selected and/or adapted based on individual characteristics, strengths, and needs.**

EXPANDED DESCRIPTION: School psychologists recognize that students in today's schools and their families come from a variety of backgrounds. They have knowledge of the potential influences of biological, social, cultural, ethnic, experiential, socioeconomic, gender-related, and linguistic factors in children's development and learning and incorporate this knowledge when designing and implementing interventions to achieve learning and social/ behavioral outcomes. School psychologists have knowledge of individual differences, abilities, and disabilities and assist with acknowledging, supporting, and integrating the activities and talents of all students into instructional programs and other settings. School psychologists recognize that experiential and linguistic differences can also result in learning difficulties and apparent disabilities for children, and they assist schools in identifying what is needed for students to succeed and what instructional or other modifications are required to address children's difficulties. School psychologists develop academic and social/behavioral interventions that reflect knowledge and understanding of children and families' cultures, backgrounds, and individual learning characteristics. School psychologists recognize that interventions most likely to succeed are adapted to the individual needs and characteristics of the students for whom they are designed.

School psychologists promote practices that help children and families of all backgrounds feel welcome and appreciated in the school and community. School psychologists recognize in themselves and others the subtle racial, class, gender, cultural, and other biases they may bring to their work and the way these biases influence decision-making, instruction, behavior, and long-term outcomes for students.

2.6 **School and Systems Organization, Policy Development, and Climate: School psychologists have knowledge of general education, special education, and other educational and related services. They understand schools and other settings as systems. School psychologists work with individuals and groups to facilitate policies and practices that create and maintain safe, supportive, and effective learning environments for children and others.**

EXPANDED DESCRIPTION: School psychologists have a current professional knowledge base of school and systems structure and organization and of general education and regular education. They use their knowledge to assist schools and other agencies in designing, implementing, and evaluating policies and practices in areas such as discipline, problem-solving, instructional support, staff training, school and other agency improvement plans, program evaluation, transition plans, grading, retention, and home-school partnerships. School psychologists have knowledge of and apply effective principles of organizational development and systems theory to assist in promoting learning, preventing problems, creating climates that result in mutual respect and caring for all individuals in the system, facilitating decision-making and collaboration, and fostering a commitment to quality, effective services for all children, youth, and families.

School psychologists regularly contribute to the development of school, agency, community, and/or public policies and procedures that advocate for effective programs and services and benefit all children, youth, and families. They have the knowledge and skills to assume leadership roles in the development of systems change plans and/or public policies (e.g., state or local school improvement plans) that directly impact the programs and services available to children, youth, and their families in schools and communities and that directly impact the ways in which school psychologists deliver their services. School psychologists assist in the development of policies and procedures to ensure that schools are safe and violence free. They participate in the implementation and evaluation of programs that result in safe and violence free schools and communities.

2.7 **Prevention, Crisis Intervention, and Mental Health: School psychologists have knowledge of human development and psychopathology and of associated biological, cultural, and social influences on human behavior. School psychologists provide or contribute to prevention and intervention programs that promote the mental health and physical well-being of students.**

EXPANDED DESCRIPTION: School psychologists have knowledge of current theory and research about child and adolescent development; psychopathology; human diversity; biological, cultural, and social influences on behavior; societal stressors; crises in schools and communities; and other factors. They apply their knowledge of these factors to the identification and recognition of behaviors that are precursors to academic, behavioral, and serious personal difficulties (e.g., conduct disorders, internalizing disorders, drug and alcohol abuse, etc.). They have knowledge of effective prevention strategies and develop, implement, and evaluate programs based on recognition of the precursors that lead to children's severe learning and behavior problems. School psychologists have knowledge of crisis intervention and collaborate with school personnel, parents, and the community in the aftermath of crises (e.g., suicide, death, natural disasters, murder, bombs or bomb threats, extraordinary violence, sexual harassment, etc.).

School psychologists are key participants in health programs for children and promote mental health in schools and other agencies. They have knowledge of and address diverse health issues such as diet, eating disorders, teenage pregnancy, AIDS prevention, and stress management. They collaborate with other health care professionals to promote behaviors that lead to good health for children. They facilitate environmental changes that support the health and adjustment of children. They have knowledge of and routinely access resources to address a wide variety of behavioral, learning, mental, and physical problems.

2.8 **Home/School/Community Collaboration: School psychologists have knowledge of family systems, including family strengths and influences on student development, learning, and behavior, and of methods to involve families in education and service delivery. School psychologists work effectively with families, educators, and others in the community to promote and provide comprehensive services to children and families.**

EXPANDED DESCRIPTION: School psychologists have a current knowledge base about (a) family systems and their influences on students' cognitive, motivational, and social characteristics that affect their development and/or academic performance; (b) family involvement in education; (c) methods to promote collaboration and partnerships between parents and educators that improve outcomes for students; (d) cultural issues that impact home-school collaboration; and (e) other family, home, and community factors that work to support learning and achievement in school. School psychologists apply this knowledge to design, implement, and evaluate programs that promote school, family, and/or community partnerships and enhance academic and behavioral goals for students. For example, school psychologists provide or collaborate with others in the development of educational and support programs that assist parents in efforts to enhance the academic and social/behavioral success of their children.

School psychologists provide support and assistance for parents when participating in school functions or activities and help them become comfortable, active, effective participants. For example, they provide support for parents when participating on special education and IEP teams, they encourage parent involvement in school wide committees and improvement teams, and they facilitate home-school communication and collaboration when problems arise. School psychologists have knowledge of and apply methods to facilitate collaboration between schools and parents in designing school curriculum and interventions for students.

School psychologists educate schools and communities regarding the influence of family involvement on children's development and achievement and advocate for parent involvement in school governance whenever feasible. They are knowledgeable about school and community resources; help create links between schools, families, and community agencies; and help coordinate services when programming for children, including multiple agencies. School psychologists work within the local system of care to provide for the health and mental health needs of children.

2.9 **Research and Program Evaluation: School psychologists have knowledge of research, statistics, and evaluation methods. School psychologists evaluate research, translate research into practice, and understand research design and statistics in sufficient depth to plan and conduct investigations and program evaluations for improvement of services.**

EXPANDED DESCRIPTION: School psychologists have knowledge of basic principles of research design, including single subject design and quantitative and qualitative research techniques, and apply the principles in their own research and as consumers of others' research. They differentiate acceptable from inadequate research and evaluate research in terms of its internal and external validity. They have knowledge of research and statistics in sufficient depth to evaluate published research and to plan and conduct their own investigations. They have knowledge of evaluation techniques and methods and integrate their knowledge of research, statistics, and evaluation when collecting data about school and community programs and in other program accountability activities. School psychologists have knowledge of measurement principles and psychometric standards and apply the knowledge when selecting and using assessment techniques and published tests. They review and evaluate validity research and psychometric properties when selecting the best assessment methods to use in data-based decision-making.

School psychologists maintain a professional knowledge base of research findings, professional literature, and other information relevant to their work and apply the knowledge base to all components of their work. They base their practice on sound research and translate new research findings into service delivery improvements. School psychologists have knowledge of and apply findings from intervention research when designing educational, mental health, or treatment programs for children.

School psychologists provide leadership in schools and other agencies in understanding and using research and evaluation data. They apply their knowledge and skills in statistics and measurement to assist school or agency personnel with valid interpretation and use of school and/or district data. School psychologists provide information about relevant research findings to school personnel, parents, and the public.

2.10 **School Psychology Practice and Development: School psychologists have knowledge of the history and foundations of their profession; of various service models and methods; of public policy development applicable to services to children and families; and of ethical, professional, and legal standards. School psychologists practice in ways that are consistent with applicable standards, are involved in their profession, and have the knowledge and skills needed to acquire career-long professional development.**

EXPANDED DESCRIPTION: School psychologists have knowledge of the standards, models, methods, and practices of their profession and apply their knowledge to all aspects of their professional services. They have knowledge of the history and foundations of school psychology, as well as psychology, education, special education, health care, and related fields and use this understanding in work with children, parents, and professionals in schools and other agencies. They have knowledge of all appropriate ethical, professional, and legal standards, and they practice in schools and other settings in ways that meet standards, both to enhance the quality of services and to protect the rights of all parties. School psychologists promote due process guidelines in all decisions affecting students; maintain accepted standards in assessment, consultation, intervention, and general professional practice; and fulfill all legal requirements, as in response to law and court decisions. They have knowledge of the processes and procedures for public policy development. School psychologists use their knowledge of professional and legal standards to advocate for the rights and welfare of children and families and to promote new public policies and practices in schools and other settings.

School psychologists recognize that their own learning and development must continue throughout their careers. They have knowledge of and apply methods to routinely evaluate their own knowledge, professional competencies, and outcomes of their services and use their evaluation to determine specific needs for their continuing professional development. They recognize their own limitations and biases, as well as those areas in which they have training and expertise. School psychologists plan and implement systematic and effective techniques to enhance their professional development throughout their careers, and they acquire training to meet current needs in schools and other settings. School psychologists maintain certification or licensure and attend continuing professional development activities. They work with other school psychologists and school or agency staff to advocate for continuing professional development opportunities for all personnel.

2.11 Information Technology: School psychologists have knowledge of information sources and technology relevant to their work. School psychologists access, evaluate, and utilize information sources and technology in ways that safeguard or enhance the quality of services.

EXPANDED DESCRIPTION: School psychologists recognize that advances in technology have many positive impacts on the dissemination of information, on their professional practice, and on services for children. School psychologists use the latest technological advances in their work, but also recognize the need to use technology in ways that safeguard or enhance the quality of services. School psychologists have knowledge of information sources and technology and of methods and standards for using information technology to enhance services. School psychologists wisely use information resources such as digital medium (e.g., CD-ROM), the World Wide Web, e-mail, interactive television, distance learning technology, etc. to acquire information, current research findings, and continuing professional development. School psychologists have knowledge and skills in using word processing, spread sheets, test scoring software, and other computer resources to function more effectively and efficiently. School psychologists have current knowledge about technology resources for children (e.g., instructional software, adaptive technology for individuals with disabilities) and use the resources when designing, implementing, and evaluating instructional programs or interventions for children.

DEFINITIONS OF TERMS USED IN *STANDARDS FOR TRAINING AND FIELD PLACEMENT PROGRAMS IN SCHOOL PSYCHOLOGY*

Integrated, sequential program of study—a planned sequence of related courses and field experiences designed around program goals. Course prerequisites, a required program sequence, and/or similar methods ensure candidates complete the program in a systematic, sequential manner.

Practica—closely supervised on-campus or field-based activities designed to develop and evaluate a school psychology candidate's mastery of distinct professional skills consistent with program and/or course goals. Practica activities may be completed as part of separate courses focusing on distinct skills or as part of a more extensive experience that covers a range of skills.

Internship—a supervised, culminating, comprehensive, pre-degree field experience through which school psychology candidates have the opportunity to integrate and apply professional knowledge and skills acquired in prior courses and practica, as well as to acquire new competencies consistent with training program goals.

School setting—a setting in which the primary goal is the education of students of diverse backgrounds, characteristics, abilities, disabilities, and needs who are enrolled in grades P-12. The school setting has available an internal or external pupil services unit that includes at least one credentialed school psychologist and provides a full range of student services.

Program faculty—faculty with primary teaching, supervisory, and/or administrative responsibilities in the school psychology program. Program faculty, as opposed to other faculty who may teach one or more program courses, participate in program decision-making, planning, and evaluation processes.

Continuing professional development—formal post-degree activities designed to enhance the knowledge and/or skills of practicing professionals or to provide opportunities to acquire new knowledge of skills.

Residency—a university or program requirement that a specified minimum number of credit hours be completed within a minimum time period. At the graduate level, full-time enrollment is typically defined as at least nine semester hours or the equivalent during any one semester. Thus, one academic year of "continuous" residency is typically defined as enrollment in at least nine semester hours per semester for a period of one academic year or two consecutive semesters.

Alternative planned experiences—planned experiences designed to accomplish many of the same goals as full-time, continuous residency. Examples include required attendance at regularly scheduled program/department seminars, participation with other candidates and faculty in professional organization meetings, participation with other candidates and faculty in ongoing research, program development and/or service activities, and similar regularly scheduled activities that provide opportunities for candidates to develop an affiliation with colleagues, faculty, and the profession.

Institutional documentation of program completion—"official" documentation provided by the higher education institution (or by a unit of the institution) that an individual has completed the entire required program of studies, including the internship. Institutional documentation is typically in the form of a degree or diploma, certificate of advanced graduate studies, transcript notation indicating program completion, or similar documentation.

Degree specialization in school psychology—a degree specifically in school psychology or a degree in an allied field (e.g., educational or counseling psychology), but with a formal, identifiable specialization in school psychology. A specialization is typically noted on the diploma or academic transcript.

FTE—full-time equivalent. The ratio of FTE candidates to FTE faculty consists of candidates enrolled full-time in the program to full-time program faculty, and/or a pro-rated proportion of part-time candidates and/or part-time faculty. Interns may be pro-rated based on the semester hours enrolled and the amount of supervision provided by program faculty.

Specialist level internship or equivalent experience—completion of a supervised internship as part of one's specialist level program or similar, supervised field experience. Experiences considered equivalent to such an internship must be defined by the program.

Graduate semester hours—units of graduate credit based on a semester course schedule. In cases in which a quarter schedule system is used, three quarter hours equals two semester hours. Thus, 90 quarter hours of credit are essentially equivalent to 60 semester hours.

Public policy—a dynamic process reflecting the nature, values, and operations of a political system such as the government or one of its subparts (e.g., schools), and includes the positive and negative consequences of government action. The process includes the establishment of priorities and the allocation and reallocation of available resources to specific plans, goals, or tasks to achieve these priorities. As such, public policy serves to create, improve, or dissolve the very systems within which school psychologists work. (Adapted from: Dye, T. R. (1995). *Understanding public policy.* Englewood Cliffs, NJ: Prentice-Hall.)

IV

Appendix IV — Standards for the Credentialing of School Psychologists

Credentialing is the process that authorizes the use of the title, "School Psychologist," or related titles, by those professionals meeting accepted standards of training and experience who seek to provide school psychological services. The purpose of this document is to provide guidelines to state and national bodies for the establishment of, and procedural processes involved in, implementing credentialing standards. These guidelines were developed and approved by the National Association of School Psychologists (NASP) pursuant to its mission to promote educationally and psychologically healthy environments for all children and youth and to advance the standards of the profession of school psychology.

The National School Psychology Certification System (NSPCS) was created by NASP to establish a nationally recognized standard for credentialing school psychologists. The title to be used by persons accepted into the NSPCS is "Nationally Certified School Psychologist," or NCSP. Among the purposes of this national credentialing system are to promote uniform credentialing standards across states, agencies, and training institutions and to facilitate credentialing of school psychologists across states through the use of equivalency.

The NASP *Standards for the Credentialing of School Psychologists* are used by the NSPCS and are considered appropriate for states to use in executing their authority in credentialing school psychologists.

CREDENTIALING STRUCTURE

1. Legal Basis for Credentialing

1.1 Credentialing is the process whereby a state authorizes the provision of school psychological services and the use of the title, "School Psychologist," (or related titles, such as "School Psychology Specialist") by professionals who meet accepted standards of training and experience. The basis of a state's credentialing authority is found in its statutory laws. Under these laws, all providers of school psychological services and all users of the title "School Psychologist" must hold a current credential, and legal sanctions and sanctioning procedures are provided for violators.

2. Credentialing Body

2.1 The state legislature empowers one or more bodies to administer the credentialing (certification and/or licensure) process. Administrative codes and regulations adopted by such bodies will comply with these *Standards for the Credentialing of School Psychologists* (or their equivalent) and carry the weight of law.

3. Nature of the Credential

3.1 The credential is issued in writing and expressly authorizes both the practice of school psychology as defined by NASP's *Guidelines for the Provision of School Psychological Services* and the exclusive use of the title "School Psychologist" in all settings.

3.2 The credential is issued for a minimum period of three years.

3.3 Where a state empowers more than one body to issue more than one type of credential, such as for the separate regulation of school psychological services in the public schools and in independent practice, the lowest entry levels of all such credentials conform to these standards.

3.4 Upon completion of one academic year of post-degree supervision, the credential will allow school psychologists to have professional autonomy in determining the nature, scope, and extent of their specific services in all settings. These services will be consistent with NASP definitions of school psychological services and will be delivered within the bounds of the school psychologist's training, supervised experience, and demonstrated expertise as specified in NASP's *Guidelines for the Provision of School Psychological Services and Principles for Professional Ethics.*

CREDENTIALING REQUIREMENTS

4. Criteria for Credentialing

4.1 The minimum requirement for credentialing will be a sixth year/specialist program, with a 60 graduate semester hour minimum, consisting of coursework, practica, internship, and an appropriate graduate degree from an organized program of study that is officially titled "School Psychology." Criteria for each area will be consistent with NASP's *Standards for Training and Field Placement Programs in School Psychology.*

4.2 Domains of Professional Practice
The applicant will complete an integrated and sequential program of study that is explicitly designed to develop knowledge and practice competencies in each of the Domains of Professional Practice. Competency requires both knowledge and skills. School psychology programs ensure that candidates have a foundation in the knowledge base for psychology and education, including theories, models, empirical findings, and techniques in each domain. School psychology programs also ensure that candidates demonstrate the professional skills necessary to deliver effective services that result in positive outcomes in each domain. The domains on the following page are not mutually exclusive and should be fully integrated into graduate level curricula, practica, and internship. Domains of Professional Practice are more fully illustrated on page 22 of NASP's *Standards for Training and Field Placement Programs in School Psychology.*

1. **Data-Based Decision-Making and Accountability:**
School psychologists have knowledge of varied models and methods of assessment that yield information useful in identifying strengths and needs, in understanding problems, and in measuring progress and accomplishments. School psychologists use such models and methods as part of a systematic process to collect data and other information, translate assessment results into empirically-based decisions about service delivery, and evaluate the outcomes of services. Data-based decision-making permeates every aspect of professional practice.

2. **Consultation and Collaboration:** School psychologists have knowledge of behavioral, mental health, collaborative, and/or other consultation models and methods and of their application to particular situations. School psychologists collaborate effectively with others in planning and decision-making processes at the individual, group, and system levels.

3. **Effective Instruction and Development of Cognitive/ Academic Skills:** School psychologists have knowledge of human learning processes, techniques to assess these processes, and direct and indirect services applicable to the development of cognitive and academic skills. School psychologists, in collaboration with others, develop appropriate cognitive and academic goals for students with different abilities, disabilities, strengths, and needs; implement interventions to achieve those goals; and evaluate the effectiveness of interventions. Such interventions include, but are not limited to, instructional interventions and consultation.

4. **Socialization and Development of Life Skills:** School psychologists have knowledge of human developmental processes, techniques to assess these processes, and direct and indirect services applicable to the development of behavioral, affective, adaptive, and social skills. School psychologists, in collaboration with others, develop appropriate behavioral,

affective, adaptive, and social goals for students of varying abilities, disabilities, strengths, and needs; implement interventions to achieve those goals; and evaluate the effectiveness of interventions. Such interventions include, but are not limited to, consultation, behavioral assessment/intervention, and counseling.

5. **Student Diversity in Development and Learning:**
School psychologists have knowledge of individual differences, abilities, and disabilities and of the potential influence of biological, social, cultural, ethnic, experiential, socioeconomic, gender-related, and linguistic factors in development and learning. School psychologists demonstrate the sensitivity and skills needed to work with individuals of diverse characteristics and to implement strategies selected and/or adapted based on individual characteristics, strengths, and needs.

6. **School and Systems Organization, Policy Development, and Climate:** School psychologists have knowledge of general education, special education, and other educational and related services. They understand schools and other settings as systems. School psychologists work with individuals and groups to facilitate policies and practices that create and maintain safe, supportive, and effective learning environments for children and others.

7. **Prevention, Crisis Intervention, and Mental Health:**
School psychologists have knowledge of human development and psychopathology and of associated biological, cultural, and social influences on human behavior. School psychologists provide or contribute to prevention and intervention programs that promote the mental health and physical well-being of students.

8. **Home/School/Community Collaboration:**
School psychologists have knowledge of family systems, including family strengths and influences on student development, learning, and behavior, and of methods to involve families in education and service delivery. School psychologists work effectively with families, educators, and others in the community to promote and provide comprehensive services to children and families.

9. Research and Program Evaluation: School psychologists have knowledge of research, statistics, and evaluation methods. School psychologists evaluate research, translate research into practice, and understand research design and statistics in sufficient depth to plan and conduct investigations and program evaluations for improvement of services.

10. **School Psychology Practice and Development:** School psychologists have knowledge of the history and foundations of their profession; of various service models and methods; of public policy development applicable to services to children and families; and of ethical, professional, and legal standards. School psychologists practice in ways that are consistent with applicable standards, are involved in their profession, and have the knowledge and skills needed to acquire career-long professional development.

11. **Information Technology:** School psychologists have knowledge of information sources and technology relevant to their work. School psychologists access, evaluate, and utilize information sources and technology in ways that safeguard or enhance the quality of services.

4.3 Practica will consist of a sequence of closely supervised on-campus or field-based activities designed to develop and evaluate a candidate's mastery of distinct professional skills consistent with program and/or course goals. Practica activities may be completed as part of separate courses focusing on distinct skills or as part of a more extensive experience that covers a range of skills.

4.4 The internship experience will consist of a full-time experience over one year, or half-time over two consecutive years, with a minimum of 1200 clock hours, of which at least 600 hours must be in a school setting. A comprehensive internship experience is required for candidates to demonstrate, under supervision, the ability to integrate knowledge and skills in the professional practice domains and to provide a broad range of outcome-based school psychological services. Internship experiences are provided at or near the end of the formal training period, are designed according to a written plan that provides a broad range of experiences, occur in a setting appropriate to the specific training objectives of the program, are provided appropriate recognition through the awarding of academic credit, occur under conditions of appropriate supervision, are systematically evaluated in a manner consistent with the specific training objectives of the program, and are conducted in accordance with current legal and ethical standards for the profession.

4.5 Professional Work Characteristics
The candidate's professional work characteristics will be evaluated and verified by the school psychology training program through information collected during courses, practica, internship, and other appropriate means. Professional work characteristics will include:

1. Respect for human diversity
2. Communication skills
3. Effective interpersonal relations
4. Ethical responsibility
5. Adaptability
6. Initiative and dependability

CREDENTIALING PROCEDURES

5. Implementation of Credentialing Criteria

5.1 Graduates of NASP approved programs, or programs consistent with NASP's *Standards for Training and Field Placement Programs in School Psychology,* and graduates of school psychology programs that, at the time of the applicant's graduation, were accredited by an agency approved by the U.S. Department of Education and met the internship requirement specified in Standard 4.4, are eligible for credentialing. (A complete listing of NASP approved programs, *Approved Programs in School Psychology,* is published annually.)

5.2 Each program that meets the criteria in Standard 5.1 is responsible for assessing a candidate's professional work characteristics and competency in the domains of professional practice.

5.3 All assessment methods used by the credentialing body or training program rely on the most objective, quantifiable, and reliable procedures available. Performance-based assessment uses multiple methods of assessment including multiple data sources, environments, and domains.

5.4 The responsibility for the final determination of professional competencies in all areas rests with the credentialing body.

6. State Credential

6.1 The state credential is granted to individuals who meet the requirements described in Standard 4, including completion of an appropriate graduate degree, demonstration of professional work characteristics, completion of applied professional practice, and competency in the domains of professional practice.

6.2 Persons who hold the credential Nationally Certified School Psychologist (NCSP) meet the criteria for an initial state credential.

6.3 Upon initial granting of the state credential, the individual arranges supervision and mentoring to assure that entry-level qualifications are translated into ongoing competency in the provision of school psychological services. Supervision consists of a minimum of two hours per week, in a face-to-face format, for the initial academic year of full-time practice or the equivalent.

6.4 Supervision and mentoring will be provided by a credentialed school psychologist with a minimum of three years of experience. For any portion of the experience that is accumulated in a nonschool setting, supervision and mentoring will be provided by a psychologist or school psychologist appropriately credentialed for practice in that setting.

6.5 Initial renewal of the state credential will be granted to applicants meeting the following criteria:
  A. Evidence of public, private, or university-based practice for a minimum of one academic year of full-time equivalent (FTE) experience during the previous three years.
  B. Evidence of continuing professional development for a minimum of 75 clock hours in the previous three year period during which the credential was in effect.

7. Nationally Certified School Psychologist

7.1 The credential, Nationally Certified School Psychologist (NCSP), is granted to persons who have successfully met national training standards by:
  A. Achieving a passing score on the Educational Testing Service's (ETS) School Psychology Examination as determined by the National School Psychology Certification Board, and
  B. Graduation from a NASP approved program, or
  C. Completion of a sixth-year/specialist level program or higher in school psychology, with a 60 graduate semester hour minimum or equivalent, consisting of course work, practica, internship, and an appropriate graduate degree from an organized program of study that is officially titled "School Psychology," and
  D. Successful completion of a 1,200 clock hour supervised internship in school psychology, at least 600 hours of which must be in a school setting, and
  E. Demonstration of competency in the domains of professional practice as specified in Standard 4.2.

7.2 Renewal of the NCSP will be granted to applicants who complete at least 75 contact hours of continuing professional development activities within a three-year period.

8. Withdrawal/Termination of the Credential

8.1 The credentialing body has the right to cancel, revoke, suspend, or refuse to renew the credential of any school psychologist, or to reprimand any school psychologist, upon proof that the school psychologist has engaged in unprofessional conduct as defined by NASP's *Principles for Professional Ethics* or *Guidelines for the Provision of School Psychological Services.* Such action must be based on a formal finding of guilt by the appropriate adjudicating body after following a documented procedure ensuring that the due process rights of all parties involved have been fully observed.

APPENDIX A

Definition of Terms Used in *Standards for the Credentialing of School Psychologists*

STANDARD 3.1:
NASP *Guidelines for the Provision of School Psychological Services*: The current standards document from the National Association of School Psychologists (NASP) describing the delivery of appropriate and comprehensive school psychological services for administrative and employing agencies.

STANDARD 3.4:
NASP *Principles for Professional Ethics*: The current document of principles from the National Association of School Psychologists (NASP) describing guidelines for ethical behavior including professional competency, professional relationships and responsibilities, and professional practices in public and private settings.

STANDARD 4.1:
NASP *Standards for Training and Field Placement Programs in School Psychology*: The current standards document from the National Association of School Psychologists (NASP) describing procedural standards supporting the comprehensive training of school psychologists at the doctoral and sixth year/specialist levels.

STANDARD 4.4:
School Setting (from Appendix A of NASP *Standards for Training and Field Placement Programs in School Psychology*): A setting in which the primary goal is the education of P-12 students of diverse backgrounds, characteristics, abilities, disabilities, and needs. The school setting has available an internal or

external pupil services unit that includes at least one credentialed school psychologist and provides a full range of student services.

STANDARD 5.1:

Approved Programs in School Psychology: The National Association of School Psychologists (NASP) publishes annually a list of training programs in school psychology that have been determined to meet NASP *Standards for Training and Field Placement Programs in School Psychology.* A copy of the Approved Program list can be obtained by contacting the National Association of School Psychologists at 4340 East West Highway, Suite 402, Bethesda, Maryland 20814, by e-mail at *cert@naspweb.org*, or can be found at the NASP website: *www.naspweb.org*

V

Appendix V — National School Psychology Certification System

NCSP RENEWAL MATERIAL

The contents were approved by the NASP Executive Board in January 1992. Revisions were approved by the National School Psychology Certification Board in September 1996. Editorial and format changes were made by the NASP Professional Development Committee in November 1996. Revisions were approved by the National Association of School Psychologists Executive Council in July 2001.

Additional copies are available on the web: www.nasponline.org

INTRODUCTION

National Association of School Psychologists (NASP) assumes that all school psychologists, and particularly those participating in the National School Psychology Certification System, have a common ethic and goal to grow professionally. It is a professional obligation to remain current regarding developments in research, training, and professional practices that benefit children, family, and schools (*Standard for the Provision of School Psychological Services*, *Professional Conduct Manual*, 2000). Membership in professional organizations, attendance at professional conferences, reading of professional literature, and discussion of professional issues with colleagues are essential components of any school psychologist's overall professional development activities. Because the knowledge base of the field is broad, training and skill levels are varied, and the professional role has many dimensions, school psychologists will want to have a personal plan for professional development. The plan should be designed to include a broad range of experiences and topics and should be unique to the needs of each individual.

Participation in the NASPs' Professional Development Program requires 75 hours of continuing professional development (CPD) activities within a three-year period. Nationally Certified School Psychologists (NCSP) are expected to document and maintain records of their CPD activities.

It is expected that school psychologists will enhance their skills in a variety of areas. Although activities covering specific skill areas are not required for the NCSP renewal, expanding one's knowledge in less familiar areas is an important aspect of professional growth. Continuing professional development should involve a variety of learning activities covering a wide range of topics.

Inasmuch as school psychologists function in a variety of job assignments in many diverse locations, NASP recognizes the importance and availability of formal and informal in-service opportunities. The intent of the CPD requirement, therefore, is not to limit the school psychologist's continuing professional development by approving only specific activities but rather to acknowledge and encourage participation in the variety of activities that are available.

SUBMITTING YOUR RENEWAL FOR PROCESSING

As of September 1, 2001, a new process for submitting your NCSP renewal is in effect. NCSPs are no longer required to submit documentation of CPD credits unless audited. The rules for the audit process are listed separately in this document.

The renewal process now consists of the following four steps:

1. Complete and maintain the documentation identifying the activities completed for the required 75 contact hours of continuing professional development. Information on proper documentation can be found later in this booklet under **Guidelines for Documentation of CPD Activities. KEEP THIS DOCUMENTATION** for your own records. Do not send it with your renewal documentation.

2. Sign the affidavit attesting to participation in the required CPD activities and agreeing to an audit if notified.

3. Fill out the Directory Information Listing and Renewal Questionnaire forms.

4. Submit the appropriate payment, including any late fees that may have accrued.

Copies of the necessary forms are included with this booklet. The renewal documentation forms are available on the web at www.nasponline.org.

FEES

Current fees for the NCSP credential renewal are located on the Directory Information form.

Late fees for renewal are assessed one calendar month after the NCSP credential expires. To avoid being assessed the late fee, the renewal must be received in the NASP office on or before the last day of the month after it expires. The late fee is listed on the Directory Information form. Any NCSP submitting a renewal that will be received one calendar month after the expiration date must include the appropriate late fees with the renewal.

AUDIT GUIDELINES

NCSPs are required to maintain proper documentation of their CPD activities. This will be in the form of the documentation discussed under "Submitting Your Renewal for Processing." Individuals will be subject to a random audit of their CPD documentation. The audit will ensure that the number of contact hours of CPD activities was accomplished as stated on the signed affidavit and that proper documentation of CPD activities is being maintained. An individual will be notified of an audit in writing. This notification may be sent at any time after the individual renews his/her NCSP credential. In general, approximately 15% of the renewals submitted will be subject to an audit.

An individual selected for audit has 60 days from the date of the notice to submit documentation of 75 CPD credits. CPD credits will meet the guidelines listed below. The NCSP will be considered expired if the individual fails to respond within the 60-day time limit.

Once the documentation of credits has been received and processed, the NCSP will be notified of the audit results. If it is determined that the NCSP has any deficiencies, the NCSP will be given 60 days to correct the deficiency. Any deficiency not corrected within the 60-day period will cause the immediate expiration of the NCSP credential.

Documentation submitted for an audit will not be returned. Copies of the documentation are acceptable; **please do not submit your originals.**

GUIDELINES FOR CONTINUING PROFESSIONAL DEVELOPMENT ACTIVITIES

Develop a Personal Plan

Activities should be chosen as part of an overall professional development plan devised by each school psychologist to enhance knowledge in several foundation areas. While submission of a formal plan is not required, participants are encouraged to devise such a plan for themselves.

Plan for a variety of activities that emphasize learning including workshop experiences, coursework, presentations, self study, program development, or research. These activities should exceed the ordinary aspects of employment.

EVALUATE THE BENEFIT

School psychologists may evaluate and select CPD activities and claim the activities for CPD credit without contacting NASP for pre-approval of these activities. There are four questions to ask when evaluating an activity to determine if it may be claimed for CPD credit. A "Yes" to all four of the following questions means the NCSP may claim CPD credit for the activity:

1. **Did the activity enhance or upgrade my professional skills or add to my knowledge base?**

2. **Was the activity relevant to the professional practice of school psychology?**
3. **Did the activity fit into my personal plan for continuing professional development?**

4. **Did the activity go beyond the ordinary aspects of my employment?**

Questions regarding the acceptability of a specific activity should be directed to the NASP Professional Standards Program at the NASP office.

GUIDELINES FOR DOCUMENTATION OF CPD ACTIVITIES

All NCSPs are required to maintain proper documentation of participation in CPD activities. If an NCSP is notified of an audit this documentation must be submitted to the NASP office within sixty (60) calendar days.

CONTINUING PROFESSIONAL DEVELOPMENT ACTIVITY CATEGORIES

Consistent with the NASP *Standards for the Provision of School Psychological Services* (2000), participation in activities designed to maintain and expand skills and to ensure quality service provision is the continuing obligation of school psychologists. With this in mind, NASP offers CPD credit for the following activities:

GROUP A	Workshops, Conferences, and In-service Training
GROUP B	College/University Courses
GROUP C	Teaching and Training Activities
GROUP D	Research & Publications
GROUP E	Supervision of Interns
GROUP F	Post-Graduate Supervised Experiences
GROUP G	Program Planning/Evaluation
GROUP H	Self Study –Sequenced Programs –Informal Programs
GROUP I	Professional Organization Leadership

CPD CREDIT

One (1) CPD credit is defined as one (1) contact hour or an actual clock hour (60 minutes) spent in direct participation in a structured educational format as a learner. Some organizations award CPD activities using a standard called Continuing Education Units (CEUs). One CEU may be equivalent to 10 contact hours or 10 CPD credits. It depends on the number of clock hours you spent in the activity.

CPD credits are considered expired after three (3) years. The three-year period is counted backward from the month the renewal is submitted to the NASP office. For example, if the renewal is submitted in June of 2003, credits earned from June of 2000 through June of 2003 would be accepted for that renewal cycle. Credits from a previous renewal cycle may *not* be resubmitted. Credits above the required 75 hours may *not* be carried over to the next renewal cycle.

PROPER DOCUMENTATION GUIDELINES

Refer to the Summary Table of CPD Credit Allowances and Ceilings to determine the required documentation for each activity. The Summary Table is located near the end of this document. Several forms of documentation are acceptable:

Certificate of Attendance	Certificates of attendance or log sheets of participation provided by the CPD sponsor are required
Official Transcripts	Official transcripts are required for college or university credit
Summary Reports	Summary Reports can be used in states where professional development is required for maintenance of certification or licensure or in school districts or other agencies/organizations where professional development is required.
Activity Documentation Form	Any activity not otherwise documented per the above instructions can be documented with this form

Participation in CPD activities must be documented properly. Documentation of CPD activities should include the following information:

- Name of participant
- NCSP or membership number
- Category or type of activity
- Date of activity
- Hours of participation
- Title or topic of activity
- Activity sponsor

CPD CATEGORIES AND CREDIT ALLOWANCES

The NASP Continuing Professional Development Program allows a variety of activities that have potential for enhancing a school psychologist's knowledge and skills.

Some activities earn one hour of CPD credit for each contact hour of participation and have no ceiling limits in terms of the number of credits that can be accumulated. Other activity categories have a maximum credit allowance and restrictions on the frequency in which credit can be claimed.

CATEGORY A: WORKSHOPS, CONFERENCES, IN-SERVICE TRAINING

This category also includes seminars/workshops taken via web cast, ITTS (interactive television), and distance learning programs.

Credit Allowances	One hour of participation = 1 CPD credit
Ceiling Limit	None
Required Documentation	Certificate of Attendance or Activity Documentation Form. Program flyers, handouts, agendas, and brochures are not acceptable forms of documentation. Please use an Activity Documentation Form if only a program flyer or agenda is available.

CATEGORY B: COLLEGE/UNIVERSITY COURSES

Distance learning courses resulting in college/university credit are included in this category.

Credit Allowances	This category refers to courses completed beyond those required for entry-level certification/ licensure. 1 quarter hour = 10 CPDs 1 semester hour = 15 CPDs
Ceiling Limit	None
Required Documentation	Official college/university transcript

CATEGORY C: TEACHING AND TRAINING ACTIVITIES

Credit Allowances	One hour of participation = 1 CPD credit except as noted. CPD credits should not be claimed for activities such as workshops or in-service training that are part of the school psychologist's regular job requirements. However, credit may be claimed for those teaching/training activities that go beyond the normal demands of each psychologist's job setting.
Ceiling Limit	Although the course or in-service training may be repeated, credit may only be claimed once.
Required Documentation	Copy of an Activity Documentation Form or course syllabus and/or program flyer with category C, the hours of CPD credit, date of training and sponsor included on the documentation.

CATEGORY D: RESEARCH & PUBLICATIONS

Credit Allowances	Research and publications are valuable professional activities. To claim credit in this category, it is necessary for the participant to reasonably estimate the amount of time spent and claim those actual hours up to the maximum specified.
Ceiling Limit	Unpublished research = 10 CPD credit maximum per project Research and publication or presentation on a topic = 25 CPD credits maximum per project

Non-research based published articles with references or poster presentation at a state or national convention = 10 CPD credits maximum per project
Published theoretical or editorial articles = 5 CPD credits maximum per project

All participants in this category should claim credit *only once for any project.*

Required Documentation

Activity Documentation Form and abstract of article if possible.

CATEGORY E: SUPERVISION OF INTERNS

Credit Allowances

For purposes of claiming CPD credit, field-supervisors of school psychology interns should consider the extent to which this role leads to professional growth on the part of the supervisor.

Supervision of one intern for one academic year = 10 CPD credits maximum.

Ceiling Limits

20 CPD credits (no more than two interns in a three year period)

Required Documentation

Activity Documentation Form

CATEGORY F: POST-GRADUATE SUPERVISED EXPERIENCE

Credit Allowances

Following completion of their school psychology degrees, many school psychologists participate in supervised fellowships, internships, or other experiences to acquire new knowledge and skills. The supervised experiences may occur in settings outside the school psychologist's regular job setting or may occur as part of a planned and sequential program on the job. For purposes of claiming CPD credit for this activity category, school psychologists should consider the extent to which the supervised experience leads to professional growth and new knowledge and skills. CPD credit may *not* be claimed for regular supervised experiences that are required as part of the school psychologist's employment. CPD credit may be claimed according to the percentage of the school psychologist's time spent in the supervised experience, according to the following:

1/4 time = 5 CPD maximum
1/2 time = 10 CPD maximum
3/4 time = 15 CPD maximum
full time = 20 CPD maximum

Ceiling Limits

Credit for supervised experiences may be claimed no more than twice (for two years) during a three-year renewal period.
Note: If the experience is taken for university/college course credit, Activity Category B should be used instead of Category F. In addition, some activities during the supervised experience, such as attendance at conferences or in-service training or informal programs of self-study, may earn CPD credit in other activity categories.

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Required Documentation	Activity Documentation Form

CATEGORY G: PROGRAM PLANNING/EVALUATION

Credit Allowances	Program planning/evaluation may be claimed when it is not an ordinary aspect of one's employment. One hour of participation = 1 CPD credit
Ceiling Limits	25 CPD credits maximum. Only one project may be submitted in a three-year period.
Required Documentation	Activity Documentation Form

CATEGORY H: SELF STUDY

Credit Allowances	Two types of self-study are valid for CPD credit: **Sequenced Programs** are self studies developed and published to provide training in specific knowledge or skill areas. A test is typically given at the end of the course and usually a certificate of completion is issued. This could also include a course taken on the Internet and is issued a credit. One Topic= 15 CPD credits (unless otherwise specified and documented in self-study publication) **Informal Programs** involve systematically studying a topic of interest by reviewing the literature and becoming familiar with the available resources. Included in this category would be book, journal, and manual reading. One topic = 15 CPD credit maximum
Ceiling Limits	Sequenced Program = no more than 30 CPD credits in a three year period Informal Programs = no more than 2 topics or 30 CPD credits during a three year period
Required Documentation	Certificate of Completion or Activity Documentation Form (including four professional sources per self study topic)

CATEGORY I: PROFESSIONAL ORGANIZATIONAL LEADERSHIP

Credit Allowances	A school psychologist who holds a position in a local, state, or national professional organization may earn CPD credit. President = 10 CPD credits Other Officer = 5 CPD credits Delegate Representative, Delegate, or Committee Chair = 5 CPD credits
Ceiling Limit	Credit may be obtained for no more than one position, per year, per organization with a maximum 20 CPD credits in 3 years.
Required Documentation	Activity Documentation Form

NATIONAL CERTIFICATION RENEWAL POLICY

The following policies, along with the previously stated guidelines, apply to the renewal of the NCSP credential:

1. The credential is valid for three years unless revoked.

2. The NCSP credential must be renewed by the expiration date, else the credential is considered expired.

3. An individual is given a grace period of one calendar month to renew the credential before a late fee is assessed.

4. If an individual earns the required 75 hours of CPD credit prior to his/her expiration date and wishes to renew prior to the expiration date, the renewal materials will be accepted by the NASP office. The full renewal fee must accompany the renewal. The individual's renewal month will be changed to the month the renewal is submitted. This allows flexibility for an individual who wishes to use future CPD credits in his/her next renewal cycle. For example, assume that an individual has earned his/her 75 CPD credits by June 2002 and they do not expire until December 2002. The individual may renew in June 2002, receive an expiration date of June 30, 2005 and use all credits earned during and after June 2002 for their next renewal cycle. (Remember credits from a previous renewal cycle may *not* be resubmitted and credits above the required 75 hours may not be carried over to the next renewal cycle.)

5. Once the NCSP credential expires, the individual has three (3) years to renew. The appropriate late fees must be paid with the renewal. CPD credits are considered expired after three (3) years. The three years are counted backward from the month the renewal materials are received in the NASP office. When an NCSP renews late, the expiration date of the credential is changed to the month the renewal is received. For example, assume an individual's NCSP credential expired on December 31, 2002. The individual submits renewal material along with the late fees in June 2003. CPD credits that were earned from June 2000 through June 2003 must be submitted, and the individual's new expiration date will be June 30, 2006.

6. An individual who fails to renew the NCSP credential within three (3) years of his/her expiration date must re-apply for the NCSP under the current standards at the time of re-application. The current NCSP Application must be submitted with all supporting documentation; the ETS National School Psychology Examination (#10400) must be retaken and the scores submitted to NASP.

7. The NCSP credential expires 36 months (3 years) from the month the renewal is received and processed. The expiration date is always the last day of the month. (See examples listed in #4 and #5 previously.)

8. A new certification card will be sent as verification of renewal.

9. Please refer to your NCSP certification card for your certification number and expiration date

RETIRED STATUS

The NCSP (Retired) designation allows retired NCSP to continue to identify themselves as persons who have met the national standard of their profession. The official title of this designation is "Nationally Certified School Psychologist (Retired)" or "NCSP (Retired)."

ELIGIBILITY

Nationally Certified School Psychologists are eligible for NCSP (Retired) status when the following requirements are met:

- All public or private remunerative activity as a school psychologist has ceased.
- The applicant has been an NCSP for at least six (6) years.
- The applicant is an NCSP in good standing at the time the application is received in the NASP office.

REINSTATEMENT

Should an NCSP (Retired) decide to re-enter the workforce, he/she can convert their NCSP (Retired) status to a full NCSP by completing the current CPD requirements and paying the appropriate renewal fee.

SUMMARY TABLE
CPD CREDIT ALLOWANCES AND CEILINGS

Activity Category	*Cpd Credit Allowances*	*Ceiling Limits*	*Required Documentation*
A. Workshops/ Conferences/ In-Service Training	One hour = 1CPD CREDIT	NONE	Certificate of Attendance or Activity Documentation Form
B. College/University Courses	One quarter hour = 10 CPD CREDITS One semester hour = 15 CPD CREDITS	NONE	Official Transcript
C. Teaching and Training Activities	One hour = 1 CPD CREDIT	Credit may be claimed only first time content is taught.	Copy of course syllabus *or* copy of program flyer *or* Activity Documentation Form
D. Research and Publications	Actual hours, up to maximum specified All maximums specified for this category are per project.	Unpublished Research = 10 CPD CREDIT MAX. Research & Publication or Presentation = 25 CPD CREDIT MAX. Article Published or Poster Presented = 10 CPD CREDIT MAX. Theoretical/editorial article = 5 CPD CREDIT MAX. Each project may only be claimed once.	Activity Documentation Form and abstract of program, if possible
E. Supervision of Interns	1 year of supervision = 10 CPD CREDITS	20 CPD CREDIT MAX. No more than 2 interns in 3 years	Activity Documentation Form
F. Post-Graduate Supervised Experiences	1/4 time = 5 CPD CREDITS MAX. 1/2 time = 10 CPD CREDITS MAX. 3/4 time = 15 CPD CREDITS MAX. full time = 20 CPD CREDITS MAX.	No more than 2 supervised experiences in 3 years	Activity Documentation Form
G. Program Planning/ Evaluation	One hour = 1 CPD CREDIT	25 CPD CREDITS MAX. No more than 1 project in 3 years	Activity Documentation Form
H. Self-Study	Sequenced: 1 topic = 15 CPD CREDITS MAX. Informal: 1 topic = 15 CPD CREDITS MAX.	Sequenced = 30 credits in a 3 year period. Informal = no more than 2 topics or 30 credits in a 3 year period.	Certificate of completion *or* Activity Documentation Form
I. Professional Organization Leadership	President = 10 CPD CREDITS Other Officer = 5 CPD CREDITS Delegate Representative / Delegate/ Committee Chair = 5 CPD CREDITS	No more than one activity per organization per year. No more than 20 CPD CREDITS in a 3-year period.	Activity Documentation Form

AFFIDAVIT OF CONTINUING PROFESSIONAL DEVELOPMENT CREDITS

National Association of School Psychologists
4340 East West Highway, Suite 402, Bethesda, MD 20814
ph: 301-657-0270 fax: 301-657-0275 e-mail: cert@naspweb.org

I hereby attest that the following information is true and accurate. If audited I will provide documentation of all Continuing Professional Development Credits listed. I am keeping and maintaining proper documentation of all Continuing Professional Development Credits earned.

Signature ______________________________ Date ______________________

PLEASE PRINT CLEARLY OR TYPE:

Name: ______________________________ Certification Number: ______________

Address: ____

City: ____________________ State: ____________ Zip: ______________

Activity Category	*Credit Allowances*	*Ceiling Limits*	*Total Hours Earned*
A. Workshops/Conferences/ In-Service Training	1 hr = 1 CPD	None	
B. College/University Courses	1 qtr hr = 10 CPD 1 sem hr = 15 CPD	None	
C. Teaching and Training Activities	1 hr = 1 CPD	Credit may be claimed only first time content is taught	
D. Research and Publications	Actual hours, up to maximum specified. All maximums specified for this category are per project. Each project may only be claimed once.	Unpublished research = 10 CPD Max Research & Publication or Presentation = 25 CPD Max Article Published or Poster Presentation = 10 CPD Max Theoretical/Editorial Article = 5 CPD Max	
E. Supervision of Interns	1 yr supervision = 10 CPD	20 CPD Max No more than 2 interns in 3 years	
F. Post-Graduate Supervised Experience	.25 time = 5 CPD Max .5 time = 10 CPD Max .75 time = 15 CPD Max full time = 20 CPD Max	No more than 2 supervised experiences in 3 years	
G. Program Planning/ Evaluation	1 hr = 1 CPD	25 CPD Max No more than 1 project in 3 years	
H. Self Study	Sequenced: 1 topic = 15 CPD Max Informal: 1 topic = 15 CPD Max	Sequenced = 30 CPD Max Informal = 30 CPD Max No more than 2 topics or 30 credits in a three year period	
I. Professional Organization Leadership	President = 10 CPD Max Other Office = 5 CPD Max Delegate Rep. /Delegate/ Committee Chair =5 CPD Max	No more than one activity per organization per year. No more than 20 CPD in a 3-year period.	
		TOTAL CPD HOURS CLAIMED	

REQUIRED: CPD Hours Earned* from (month/year)________________ to (month/year)________________

*Credits older than three years are considered expired. The three years is counted backward from the month the renewal is submitted.

Rev.: August, 2001

National School Psychology Certification System • NCSP •

DIRECTORY INFORMATION

National Association of School Psychologists
4340 East West Highway, Suite 402, Bethesda, MD 20814
ph: 301-657-0270 fax: 301-657-0275 e-mail: cert@naspweb.org

I hereby give my permission for the following information to appear in the NCSP Directory. The Directory is posted on the NASP web site under the NCSP Only Secured page.

Signature ______________________________ Date ______________________

CERTIFICATION NUMBER : ______________________

PLEASE PRINT CLEARLY OR TYPE
(Required information: this information is also used to update your record for future mailing)

Name: ______________________________

Address: ______________________________

City: ______________ State: ______________ Zip: ______________

(Optional information for directory listing)

Work Phone: ______________ Home Phone: ______________

E-Mail Address: ______________________________

Place of Employment: ______________ Title: ______________

If changes or additions are made in degree, state certification, or state licensure, you must enclose documentation (copies of transcript, certificate or license) to verify these changes or additions.

States Certified: ______________ States Licensed: ______________

Highest Degree Held: ______________ Language Spoken (Other than English): ______________

RENEWAL FEES:

	NASP Members	Non-NASP Members	Quantity	Total
Renewal Fee	$80.00	$115.00	1	
Late Fees* (for every six months the renewal is late)	$13.00	$ 19.00	____	
			Total Amount Due:	

* Late fees for renewal accrue one calendar month after the NCSP credential expires. To avoid being assessed the late fee, the renewal must be received in the NASP office on or before the last day of the month.

Please make check payable to NASP and attach check to this form or complete the charge card information.

Charge to: ☐ Visa ☐ MasterCard Card No: ______________________

Exp. Date: (Month/Year) ______________ Signature: ______________________

Rev.: August, 2001

National School Psychology Certification System

NCSP RENEWAL QUESTIONNAIRE

National Association of School Psychologists
4340 East West Highway, Suite 402, Bethesda, MD 20814
ph: 301-657-0270 fax: 301-657-0275 e-mail: cert@naspweb.org

Name: ______________________ Certification No.: ______________________

Address: ______________________ Daytime Phone No.: ______________________

City, State, Zip: ______________________ Fax No.: ______________________

E-Mail: ______________________

1. Have you ever been found in violation of ethical principles by an ethics or professional practices board?
☐ YES ☐ NO

2. Have you ever voluntarily surrendered a professional credential in response to an ethics charge?
☐ YES ☐ NO

3. Have you ever received disciplinary action from an ethics or professional practices board?
☐ YES ☐ NO

4. Have you ever had a professional credential revoked, suspended or limited by an ethics or professional practices board?
☐ YES ☐ NO

5. Have you ever been convicted of or pleaded guilty or nolo contendere to a felony or other offense, other than a minor traffic offense, in a federal, state, or municipal court?
☐ YES ☐ NO

6. Have you ever received formal disciplinary action by an employer or supervisor based wholly or in part on ethical issues?
☐ YES ☐ NO

If the answer to any of the above questions is "yes," please provide a complete explanation on a separate page(s).

I verify that the information herein is true and accurate. I further affirm that I will abide by NASP's Principles for Professional Ethics and agree to submit to NASP procedures for adjudication of any alleged violations of same.

______________________ ______________________

Signature Date

Rev.: August, 2001

ACTIVITY DOCUMENTATION FORM

National Association of School Psychologists
4340 East West Highway, Suite 402, Bethesda, MD 20814
ph: 301-657-0270 fax: 301-657-0275 e-mail: cert@naspweb.org

INSTRUCTIONS: This documentation form is to be used to report activities for which no other standard documentation exists. A separate form must be used for each activity.

Name: ______________________ Certification No.: ______________

Address: ______________________ Daytime Phone No.: ______________

City, State, Zip: ______________________ Fax No.: ______________

E-Mail: ____

Title of Activity: ____

Date(s) of Activity: (month/day/year) ______________ Sponsor: ______________

Description of Activity:

Type of Activity: ____

Actual Number of Clock Hours of Participation: ______________________

CPD Credits Earned (See credit allowances/limits in the CPD table): ______________

I affirm that this activity merits CPD credit in that it meets the following criteria:

1. This activity enhanced my professional skills and/or added to my knowledge base.
2. This activity was relevant to the professional practice of school psychology.
3. This activity is within my personal plan for continuing professional development.
4. This activity exceeded the ordinary aspects of my employment.

The activities reported on this form reflect actual activities in which I participated. I understand that falsification of this information is an ethical violation and may result in my being ineligible for future certification and/or legal actions may be taken against me.

______________________ (Signature) ______________ (Date)

– Reproduce This Form as Needed –

Rev.: August, 2001

VI Appendix VI — Position Statements

Ability Grouping

To ensure educational equity and excellence for all America's youth, NASP supports the creation of inclusive classrooms that are based on the belief that all students can learn—a core value of all schools in a democracy. NASP believes that tracking, or whole class ability grouping, is not consistent with that core value. Extensive research on ability grouping has documented the following negative effects:

- Students with lower ability achieve less in lower track classes than in mixed ability classes.
- Students with higher ability do not achieve more in tracked classes than in mixed ability classes.
- Placing students with lower ability in tracked classrooms reduces self-esteem, with a particularly negative effect on students' sense of their own academic competence.
- Tracking students reduces the likelihood that students placed in lower track classes will choose college preparatory courses.
- Tracking students reduces opportunities to develop relationships among students from other racial, ethnic, and socioeconomic groups and has a negative effect on race relations.
- The placement decision concerning ability grouping is often made very early in a student's school career, is often based on questionable data, and is enduring.

NASP believes that grouping students heterogeneously offers advantages unavailable in schools that track. When implemented appropriately, heterogeneous grouping:

- gives all students equal access to an enriched curriculum and the highest quality instruction schools have to offer;
- avoids labeling and stigmatizing students with lower ability;
- promotes higher expectations for student achievement;
- reduces inschool segregation based on socioeconomic status, race, gender or ethnicity, or disability;
- encourages teachers to accommodate individual differences in students' instructional and social needs;
- enables students to learn from their peers, including students whose background may be very different from their own; and
- emphasizes effort more than ability.

NASP recognizes that heterogeneous grouping will not automatically guarantee all students a quality education. "Watering down" the curriculum or "teaching to the middle" will create disadvantages for able students and should be avoided. While NASP believes that all students can benefit from a more challenging curriculum, we also strongly support the development of a curriculum which recognizes and accommodates individual differences in learning styles, abilities, and interests. To be successful, mixed ability grouping must occur within the context of such a curriculum.

NASP also recognizes that heterogeneous classes require instructional and organizational innovations to accommodate a wide range of learners. Such approaches include cooperative learning groups, peer tutors, flexible grouping practices, team teaching, multiage groupings, and instruction in higher order thinking and problemsolving skills. Where teachers do not currently possess competencies to enable them to work effectively with mixed ability classes, a commitment to further training is essential.

NASP believes that "untracking" schools requires careful planning and collaboration among constituent groups, including teachers, administrators, support personnel, students, and parents. Planned change can best take place using a model that includes the following:

- a steering committee composed of educators, parents, community members and school board representatives whose task is to study grouping practices and make policy recommendations to the school board;
- local self-study to assess the impact of grouping practices within the school community;
- wide dissemination of local and national studies of ability grouping effects;
- a board-approved policy statement on grouping for instruction; and
- implementation of a strategic plan that allows for a phase-in process and ensures monitoring, trouble-shooting, and evaluation.

NASP believes that school psychologists can play a central role in helping schools develop appropriate alternatives to tracking. School psychologists have access to research, understand good instructional practices that enhance learning for all students, and possess group problem-solving skills that make them valuable as members of steering committees and strategic planning groups and as staff trainers.

School psychologists can contribute to the process of untracking schools by:

- making research available to administrators and central office personnel;
- leading informal study groups to explore alternative grouping practices;
- becoming members of steering committees assembled to study tracking and to develop policy recommendations; and
- participating in strategic planning and staff development to prepare for untracking.

NASP recognizes that schools cannot simply eliminate tracking but must develop viable alternatives. Developing alternatives to tracking will take patience and careful planning. In order for schools to live up to the promise of educating all students to become productive citizens of the 21st century, NASP believes these alternatives must be characterized by fairness and challenge, with equity and excellence equally available to all learners.

Adopted by the NASP Delegate Assembly, April 17, 1993
Reapproved by the NASP Delegate Assembly, July 25, 1998

This position statement drew on material from George, P. (1992). How to untrack your school. Alexandria, VA: Association for Supervision and Curriculum Development.

Advocacy for Appropriate Educational Services for All Children

P.L. 94-142 (The Education of All Handicapped Children Act) has achieved major goals in serving handicapped children, many of whom had been previously excluded from appropriate educational programs. Since its enactment in 1975, all handicapped children have been guaranteed a free and appropriate education, the right to due process, and individualization of program according to need. We strongly support the continuation of legislation which has mandated these guarantees.

We also recognize that serious problems have been encountered as school districts strive to meet these mandates and that quality education is still an elusive goal. Some of these problems reflect difficulties within special education; others appear to be special education issues but have their origins in the regular education system.

One major set of problems involves reverse sides of the issue of access to appropriate education:

(1) On the one hand, access to special education must be assured for all significantly handicapped children who need and can benefit from it.

(2) Conversely, children are being inappropriately diagnosed as handicapped and placed in special education because of: (a) a lack of regular education options designed to meet the needs of children with diverse learning styles, (b) a lack of understanding, at times, of diverse cultural and linguistic backgrounds, and (c) inadequate measurement technologies which focus on labels for placement rather than providing information for program development.

It is not a benign action to label as "handicapped" children who are low achievers but are not, in fact, handicapped, even when this is done in order to provide them with services unavailable in general education. School personnel often resort to labeling because it seems the only way to obtain needed services for children. This is an unfortunate result of categorical models which attach funding to classifications. Other problems originating in the classification system include:

- Labels that are often irrelevant to instruction needs.
- Categories,based on deficit labels, that are rather arbitrarily defined, particularly for mildly handicapped and low achieving students, but which come to be accepted as "real" and may prevent more meaningful understanding of the child's psychoeducational needs. The intent of this statement is not necessarily to endorse mixing children with different moderate to severe handicaps in a single special education classroom.
- Reduced expectations for children who are placed in special needs programs.
- Assessment processes aimed at determining eligibility which often deflects limited resources from the determination of functional educational needs and the development of effective psychoeducational programs.
- A decreased willingness on the part of regular education, at times bordering on abdication of responsibility to modify curricula and programs in order to better meet the diverse needs of all children.

As increasing numbers of children are classified as handicapped and removed from regular classrooms for special instruction, there has been a dramatic reduction in the range of abilities among children who remain within the general education system.

Concurrently, as national standards for excellence are being raised, the number of children at risk for school failure is growing dramatically. Without provisions to prepare students for higher expectations through effective instructional programs, many of these children may also be identified as handicapped and placed in special education. This climate, in which children are tested and labeled as failures or as handicapped in increasing numbers, creates an urgent need for reexamination and change in the system which provides access to services.

In view of these problems, and based upon the commitment to see that all children receive effective and appropriate education irrespective of race, cultural background, linguistic background, socio-economic status, or educational need, we believe:

- All children can learn. Schools have a responsibility to teach them, and school personnel and parents should work together to assure every child a free and appropriate education in a positive social environment.

- Instructional options, based on the individual psychoeducational needs of each child, must be maximized within the general education system. Necessary support services should be provided within general education, eliminating the need to classify children as handicapped in order to receive these services.

- Psychoeducational needs of children should be determined through a multi-dimensional, nonbiased assessment process. This must evaluate the match between the learner and his or her educational environment, assessing the compatibility of curriculum and system as they interact with the child, rather than relying on the deficit based model which places the blame for failure within the child. Referral to the assessment and placement process must always relate directly to services designed to meet psycho-educational needs.

- In addition to maintaining current protection for handicapped children, protections and safeguards must be developed to assure the rights of children who are at risk for school failure and require services while remaining in general education without classification as handicapped.

We propose a new national initiative to meet the educational needs of all children:

We propose the development and piloting of alternatives to the current categorical system. This requires reevaluation of funding mechanisms, and advocacy for policy and funding waivers needed for the piloting of alternative service delivery models. It also requires the development of increased support systems and extensive retraining of all school personnel to enable them to work effectively with a broad range of children with special needs within the regular education system.

This initiative will encourage greater independence for children by enabling them to function within the broadest possible environment, and independence for school personnel by providing them with training and support so they can help a wide range of children.

The types and extent of change we are suggesting should be made cautiously. Targeted funds intended for children with moderate and severe handicapping conditions must be protected. Similarly, resources for children who are not handicapped, but who experience learning difficulties, must be protected even though these children are served within general education. We need to assure that no child is put at risk for loss of services while the change process is occurring.

Our task is to reduce the rigidities of the current system without taking away the protections offered by P.L. 94-142. All experimentation and research must take place within a framework of maximum protection for children. It is highly likely that this may require the development of temporary parallel systems — the traditional system of classification and placement under P.L. 94-142, and a system of experimental programs, primarily within general education — until satisfactory models can be developed which meet the requirements of accountability, due process, and protection of students' and parents' rights, and provide funding for students in need of services. In addition, while these recommended modifications might reduce the risk of misclassification due to cultural or linguistic differences, we caution that these issues must continue to be monitored and discussed during the transition period and beyond.

Because of the complexity of these issues, the generation of effective solutions will require a national effort of interested persons and organizations which we hope to generate through this task force. We will actively work toward the collaboration of a wide variety of individuals and organizations, joining together to develop a strong base of knowledge, research, and experience in order to establish new frameworks and conceptualizations on which to base decisions, design feasible service delivery options, advocate for policy and funding changes needed to implement these alternatives, and coordinate efforts and share information for positive change. We invite you to join us.

This statement issued jointly by the National Association of School Psychologists and the National Coalition of Students.

School Psychologists' Involvement In The Role of Assessment

The National Association of School Psychologists promotes educational and mental health services for all children and youth. Assessment, linked to prevention and intervention, is an important part of ensuring that all children and youth receive needed services. School psychologists, through training, continuing professional development, research activities and experience, are experts in assessment. They can provide local education agencies, as well as state education agencies, with the knowledge, skills, and techniques needed to restructure schools in positive ways. Thus, NASP endorses assessment practices that are tailored to the needs of the individual student in the context of a comprehensive delivery system which facilitates educational progress for all children.

Evidence from practice and research indicates that:

- specialized training and skills in areas of psychological and educational assessment are needed by those engaged in such practices;
- assessment and intervention should be designed to produce positive outcomes for the student;
- multidisciplinary team assessment must include multiple sources of information, multiple procedures, and multiple settings in order to yield a comprehensive understanding of student's abilities;
- assessment and intervention must be multidimensional and based on the needs of the student;
- family systems and home environments substantially influence the development of all students and should be addressed in assessment;
- parent-professional and where appropriate student collaboration is crucial to decision making as well as to the identification of students' and families' needs;
- longitudinal assessment is needed to evaluate and document progress or response to interventions; and
- assessment information should guide intervention strategies.

Therefore, the National Association of School Psychologists endorses assessment practices that are:

- linked to efforts to resolve the problem through intervention and/or early intervention;
- based on the characteristics of students and related environments;
- relevant to the referral question;
- comprehensive in addressing the educational, cognitive, and mental health needs of the student;
- directly linked to relevant intervention designs for the student;
- not limited to any single methodology or theoretical framework;
- nondiscriminatory in terms of ethnicity, gender, native language, family or socioeconomic status;
- technically appropriate and used for the purposes for which they were developed and/or validated.

The National Association of School Psychologists encourages all school psychologists and their service delivery units to assure that ethical standards are maintained in the use of assessment procedures and that such assessment techniques are used only by qualified personnel.

NASP promotes efforts to establish empirical foundations for all assessment procedures. School psychologists, because of their training and experience in psychometric theory and practices, should apply their expertise to the use and interpretation of all methods of evaluating student performance and program effectiveness. All approaches to assessment, including, but not limited to techniques such as performance-based assessment, standardized measures of intelligence and academics, curriculum-based assessment, psychological, personality, social-emotional measures, behavior rating scales, ecological assessment, portfolio review, etc., can be useful and should receive empirical examination. School psychology training programs are encouraged to assist students in developing research concerning all aspects of assessment methodologies and their application to meet the needs of children and youth.

Position statement adopted by NASP Delegate Assembly, July 1994.

School Psychologists: Assessment Experts for Restructured Schools

School psychologists have long been recognized for their expertise in developing, conducting, and interpreting individual and program assessment procedures; and

School psychologists are specifically trained in psychometric theory, assessment procedures and the applications of assessment data to educational decisions; and

School psychologists have expertise in norm-referenced assessment techniques that are well grounded in research; and

School psychologists promote the use of technically adequate assessment tools which are directly linked to instruction and intervention; and

Initiatives for school restructuring, such as inclusion, outcome-based education, and site-based management, have significant implications for the evaluation of student and program outcomes; and

New models of schools may require new approaches to student and program evaluation; and

The current empirical base for new approaches such as authentic assessment is very limited; and

Furthermore, be it resolved that the National Association of School Psychologists will work with school psychologists to refine the appropriate use of norm-referenced assessment techniques and expand their understanding and utilization of alternative assessment techniques. NASP will work with training programs to ensure that alternative models of assessment are included in the revision and updating of core curriculum to prepare school psychologists for their roles in restructured schools. NASP affirms its commitment to ensure that practicing school psychologists have opportunities to learn and develop skills in functional and problem-solving assessment through ongoing professional development.

Adopted by the NASP Delegate Assembly, April 17, 1993

Students With Attention Problems

The National Association of School Psychologists advocates appropriate educational and mental health services for all children and youth. NASP further advocates noncategorical models of service delivery within the least restrictive environment for students with disabilities and students at risk for school failure.

NASP recognizes that some students with academic and adjustment problems exhibit a constellation of behaviors commonly associated with Attention Deficit Hyperactivity Disorder (ADHD). NASP believes that these behaviors exist along a continuum from mild to severe and that appropriate interventions will vary depending on the nature and severity of the behaviors of concern.

Longitudinal data suggest that the behaviors associated with ADHD typically present at an early age, may change over time, and may persist into adulthood. Therefore, NASP believes that interventions must be designed within a developmental framework. Furthermore, recognizing that these students are at particular risk for developing social-emotional and learning difficulties, NASP believes problems should be addressed early to reduce the need for long- term special education. NASP believes that students with severe attention problems can be provided appropriate special education services under current disability categories of the IDEA or with accommodations in regular education through Section 504 of the Rehabilitation Act of 1973.

Diagnosis of ADHD should be done with care and with the understanding that attention problems are also symptoms of other psychological conditions. Because attention problems can co-exist with other significant problems or be symptomatic of very different disorders, it is essential that a thorough, differential evaluation be conducted prior to diagnosis and treatment, and that this assessment should include direct input from school and home. Further, NASP strongly believes that assessment of attention problems should be linked to interventions and recommends that intervention assistance to students, teachers and parents is provided early and for as long as such support is necessary to assure optimal performance.

NASP believes that effective interventions should be tailored to the unique strengths and needs of every student. For children with attention problems, such interventions will often include the following:

1) Classroom modifications to enhance attending, work production, and social adjustment;

2) Behavior management systems to reduce problems in areas most likely to be affected (e.g., unstructured settings, large group instruction, independent seatwork, etc.);

3) Direct instruction in study strategies and social skills, with explicit strategies for enhancing generalization to natural environments such as the classroom, playground, etc.;

4) Collaboration and consultation with families to ensure that parents' expertise in managing their child is fully utilized, to support parents' behavior management at home, and to facilitate the use of consistent approaches across home, school, and community settings;

5) Monitoring by a case manager to ensure effective implementation of interventions, to provide adequate support for those interventions, and to evaluate the effectiveness of programs in meeting behavioral and academic goals;

6) Education of school staff in characteristics and management of attention problems to enhance appropriate instructional modifications and behavior management;

7) Access to special education services when attention problems significantly impact school performance;

8) Collaboration with community agencies providing medical and related services to students and their families;

9) Interventions to help these students to appreciate their unique abilities and to develop their self esteem.

Research indicates that medication can be an effective treatment for many students with attention problems and can enhance the efficacy of other interventions. NASP believes that a decision to use medication rests with parents and is not an appropriate contingency for school placements and interventions. A thorough, differential assessment is essential prior to pharmacological intervention to assure that the most appropriate medication (if any) is prescribed. Furthermore, medication should be considered only after attempting or ruling out alternative, less invasive treatments. When medication is considered, NASP strongly recommends:

1) That behavioral and academic data be collected before and during blind medication trials to assess baseline conditions and the efficacy of medication; and

2) That communication between school, home, and medical personnel emphasize mutual problem solving and collaborative teamwork; and

3) That the student's health, behavior and academic progress while on medication are carefully monitored and communicated to appropriate medical providers.

NASP believes school psychologists have a vital role to play in developing, implementing, and monitoring effective interventions with students with attention problems. As an Association, NASP is committed to publishing current research on ADHD and to providing continuing professional development opportunities to enhance the skills of school psychologists to meet the diverse needs of students with attention problems.

This revision was adopted by the NASP Delegate Assembly, July, 1998.

Employing School Psychologists for Comprehensive Service Delivery

The National Association of School Psychologists supports policies and practices that enhance the education of all students. In its 1997 Standards for the Provision of School Psychological Services[1], NASP promotes school psychological services that "are provided in a coordinated, organized fashion and are deployed in a manner that ensures the provision of a comprehensive continuum of services..." (Standard 3.1). In addition to these professional standards, the federal mandates of the Individuals with Disabilities Education Act (IDEA) require that the evaluation and placement of students with disabilities is comprehensive, multi-faceted and determined by a multi-disciplinary team. This process stresses the need for educational specialists to work with each other in the educational environment and to gather input from numerous sources, including observation of the student within the learning environment, consultation with school personnel regarding educational performance, consultation with parents and individualized assessment of the student's skills.

During times of economic crisis and personnel shortages, school districts may consider alternatives to employing their own school psychologists, such as contracting out for specific services or general staff reductions. The increased availability of third-party reimbursement may make arrangements with private providers more attractive. NASP is concerned about staffing policies that are detrimental to the best interests of the child, family and school system as a whole. Therefore, it is essential that administrators and policymakers understand the nature and potential limitations of these options and the importance of maintaining professional standards in order to make cost-effective decisions that do not sacrifice the quality or availability of services to students.

Independent contracting for school psychological services includes a variety of arrangements, such as privatization and subcontracting through other public agencies. Some school districts have implemented contracts with agencies or individuals which shift the delivery of services from the public to the private sector, or may contract services through public cooperative (intermediate) units, or may supplement or supplant school-based services with "co-located" services of community agencies.

NASP does not oppose the provision of comprehensive school psychological services through intermediate educational agencies or community providers, as long as such services do not supplant the services of district-employed school psychologists. In fact, NASP recognizes that such alternatives often represent the most viable means of insuring appropriate, comprehensive services. Further, NASP recognizes that the provision of limited contractual services (such as for a specific service) may augment available district resources and contribute toward the delivery of comprehensive services overall. However, NASP opposes independent contracting if it compromises the delivery of comprehensive services as required by professional standards and federal law and if contracting supplants or decreases the availability of comprehensive services delivered by district-employed school psychologists (Standard 3.4.4).

Both NASP and the American Psychological Association recognize the specialized training in school psychology as different from the training in other specialty areas, such as clinical and industrial psychology. As stated in NASP's Standards (3.4.3), "persons providing contractual psychological services are fully credentialed school psychologists..." The independent contractor who is not a trained school psychologist may be a skillful clinician but may lack essential knowledge, expertise and experience to gather appropriate data in the school context and to facilitate a collaborative, comprehensive approach with the other members of the educational team.

School psychologists employed by school districts:

- offer cost-effective services including early prevention, intervention and wellness activities which can eliminate the need for many costly evaluations and placements;
- are readily available to school personnel, students and the community for crisis prevention and intervention services;
- understand school issues from a systems perspective;
- are sufficiently familiar with the students, staff, legal requirements and policies of the school system to facilitate communication and defuse potentially dangerous or adversarial situations;
- provide accessible mental health services to children and families, including evaluation, group and individual counseling, and consultation regarding mental health and educational issues;
- provide a wide range of services not easily or cheaply purchased via private contracts, such as reviews of records; consultation with parents and school personnel; ongoing, systematic classroom observations; inservice training; program planning and evaluation; and participation on multidisciplinary teams.

Contractual services may be appropriate in limited circumstances in which an outside contractor supplements the regular services of the district's school psychologists or provides comprehensive services which are otherwise unavailable or impractical. Such circumstances include:

- specific situations where specialized training and experience beyond what is typically available in the school district are required in order to provide appropriate service to the student or district, such as with low incidence disabilities or the provision of clinical home-based services through shared funding;
- situations where a very small district is unable to support the funding of a full-time psychologist and must seek an alternative arrangement such as contracting through an independent provider or intermediate agency;
- situations where a personnel shortage creates a temporary need to obtain services from available sources such as private providers;
- situations where a second opinion or outside service is warranted due to conflict between family and school regarding a school-based service.

Psychologists hired under independent contract to provide services in the schools should hold at least the same credentials and should be expected to practice within the same professional and ethical standards as school-employed psychologists. Any contractual agreement should meet the standards established by NASP (Standards for the Provision of School Psychological Services, 1997, Section 3.4, "Contractual Services") and insure that:

- the welfare and best interests of the student are the primary concern of the service provider;
- the amount and quality of psychological services are increased, not decreased;
- due process rights of students are upheld; and
- the agreement does not result in any loss of legitimate employee rights, benefits or wages.

The National Association of School Psychologists is committed to enhancing educational opportunities for all students through the organized delivery of comprehensive school-based psychological services. NASP further recognizes that such services can be delivered in a variety of ways without compromising the rights and needs of students. However, in most situations, the most cost-effective, professionally accountable services will be those delivered by school psychologists employed by the school district.

Therefore, NASP urges school administrators and school board members to consider the legal, educational and long-term financial ramifications of any shift of services away from the school district, and to seek more cost-effective models of service delivery that do not decrease the availability of school-based psychologists. NASP further urges school psychologists to work with administrators, collective bargaining units and professional associations to help develop strategies for the delivery of cost-effective services that enhance educational outcomes for all students while maintaining their rights as employees.

Finally, NASP urges school psychologists and other educators to empirically evaluate the cost-effectiveness of current and proposed models of service delivery and to establish ongoing program evaluation of all providers of school-based psychological and mental health services.

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1. Standards for the Provision of School Psychological Services. National Association of School Psychologists, 1997.

— Original statement adopted by the NASP Delegate Assembly, April 18, 1993

— Revision adopted by the NASP Delegate Assembly, April 10, 1999

Corporal Punishment in Schools

The use of corporal punishment has been declining in U.S. schools. Waning public acceptance, increased litigation against school boards and educators regarding its use and legislative bans have led to the decline. More than half of the states ban its use. In states where it is allowed, many school boards voluntarily prohibit it. Yet, over 250,000 children are being hit yearly in public schools with a disproportionate number being minority children and children with disabilities. Corporal punishment is any intervention which is designed to or likely to cause physical pain in order to stop or change behavior. In the United States, the most typical form of school corporal punishment is the striking of a student's buttocks with a wooden paddle by a school authority because the authority believes the student has disobeyed a rule.

Discipline is important and schools have a strong role in teaching children to be self-disciplined. Self-discipline is the ability to understand a situation, to make appropriate decisions about one's behavior in that situation and to ordinarily perform the appropriate behavior when unsupervised by adults. Effective discipline is primarily a matter of instruction rather than punishment. Many means of effective and safe discipline are available. Punishment contingencies in general tend to have negative side effects including leading students to be sneaky and to lie about their behavior in order to escape punishment. Corporal punishment is a technique that can easily be abused leading to physical injuries. Evidence indicates that corporal punishment negatively effects the social, psychological and educational development of students and contributes to the cycle of child abuse and pro-violence attitudes of youth. The National Association of School Psychologists (NASP) reaffirms its opposition to the use of corporal punishment in schools and will actively support removal of legal sanctions for its use. NASP resolves to educate the public about the effects of corporal punishment and alternatives to its use, and will encourage research and the dissemination of information about corporal punishment effects and alternatives.

Alternatives to Corporal Punishment

Effective discipline includes programs and strategies for changing student behavior, for changing school or classroom environments, and for educating and supporting teachers and parents. Effective discipline includes prevention and intervention programs and strategies. It is empirically based rather than relying on custom or habit. The following are alternatives which can be initiated and developed or supported by school psychologists and other educators and which help provide an atmosphere where learning can take place and where students learn to be self-disciplined:

- Help students achieve academic success through identification of academic and behavioral deficiencies and strengths and help get them appropriate instruction
- Use behavioral contracting
- Encourage positive reinforcement of appropriate behavior
- Use individual and group counseling
- Encourage disciplinary consequences which are meaningful to students and have an instructional and/or reflection component
- Provide social skills training

Alternatives for changing the school and classroom environment:

- Encourage programs that emphasize early diagnosis and intervention for school problems including problems of staff and problems of students

- Encourage programs that emphasize values, school pride and personal responsibility and support the mental health needs of children

- Encourage development of fair, reasonable and consistent rules

- Support strong parent/school and community/school communications and ties

Alternatives for educating and supporting teachers (as preventive measures):

- Provide information on effective discipline programs and resources

- Provide inservice programs on communication, classroom management, understanding of behavior and individual differences, and alternative ways for dealing with misbehavior

- Network with community groups and mental health agencies to provide programs and support for school staff

- Assist with development and monitoring of behavioral intervention programs - schoolwide, classwide or individual

Alternatives for educating and supporting parents:

- Provide parenting classes on effective discipline particularly as it relates to such issues as homework, school grades, peers, learning problems, developmental expectations and undesirable behavior

- Provide school-based consultation to parents on effectively managing child behavior

- Encourage home visitation programs for parents of babies and toddlers - programs which focus on developmental expectations, resources and discipline

- When corporal punishment is allowed, help parents to protect children by informing them about exemptions to corporal punishment that may exist such as written notification or amending the IEP as well as what actions parents should take if a child is injured (seeing a physician, contacting child protection authorities and the police, taking color photos of the injury and contacting advocacy organizations)

The Role of School Psychologists

School psychologists can take leadership roles in encouraging school districts to ban corporal punishment, if it is allowed, and in helping to develop effective discipline programs. They are trained in identifying learning and behavior problems which often lead to school discipline problems if undiagnosed and untreated. They are trained in developing appropriate programs and interventions for children with learning and behavior problems. Education programs for parents and teachers which focus on appropriate ways to deal with misbehavior and ways to foster self-discipline can be provided by school psychologists. Other direct services which can be provided by school psychologists include counseling of students and consultation with parents and school staff. School psychologists can bring to schools research about the development and evaluation of disciplinary codes, social skills training and the effectiveness of alternative discipline methods. School psychologists can bring to educators, the community, and policy makers information about the effects of corporal punishment and the need to eliminate its use.

Summary

NASP reaffirms its opposition to the use of corporal punishment in schools because of its harmful physical, educational, psychological and social effects on students. Corporal punishment contributes to the cycle of child abuse and pro-violence attitudes of youth by teaching that it is an acceptable way of controlling the behavior of others. Discipline is important and effective alternatives are available to help students develop self-discipline. These are primarily instructional in nature rather than punitive. School psychologists provide many direct services to improve discipline of individual children as well as services which improve classroom and schoolwide discipline. NASP will continue to work actively with other organizations to educate the public and policy makers about the effects of corporal punishment and alternatives to its use and will seek its complete prohibition in schools.

— Original Statement Adopted by NASP Delegate Assembly, April, 1986

— Revision adopted by NASP Delegate Assembly, April 18, 1998

— Revision adopted by NASP Delegate Assembly, July 21, 2001

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Early Childhood Assessment

The National Association of School Psychologists believes that early identification of developmental and learning problems in preschool and primary grade children is essential because of children's broad and rapid development. Intervention services for these children's psychological and developmental difficulties are essential, beneficial, and cost-effective. Because the accurate and fair identification of the developmental needs of young children is critical to the design, implementation, and success of appropriate interventions school psychologists must play a key role.

Evidence from research and practice in early childhood assessment indicates that issues of technical adequacy are more difficult to address with young children who have short attention spans and go through periods of variable, rapid development. Therefore, standardized assessment procedures should be used with great caution in educational decision-making because such tools are inherently less accurate and less predictive when used with young children.

Multidisciplinary team assessments must include multiple sources of information, multiple approaches to assessment, and multiple settings in order to yield a comprehensive understanding of children's skills and needs. Therefore, assessments should center on the child in the family system and home environment, both substantial influences on the development of young children. Similarly, families' self-identified needs should drive the decision-making process concerning the identification of child and family services.

Because categorical identification of infants, toddlers, and young children is ineffective in meeting the special needs of young children, assessment of infants and young children requires specialized training and skills beyond those required for the assessment of older children. Longitudinal and functional assessment of behavior and development of infants, young children, and families in a variety of settings is needed to evaluate and document progress and response to intervention over time, and must guide early intervention strategies in meaningful ways.

Therefore, the National Association of School Psychologists will promote early childhood assessment practices that are:

- developmentally appropriate, ecological, comprehensive, skills-based, and family-focused;
- conducted by a multi-disciplinary team;
- linked to intervention strategies designed for young children, rather than to categorical classification;
- based upon comprehensive, educational and/or behavioral concerns, rather than isolated deficits identified by individual assessments;
- nondiscriminatory in terms of gender, ethnicity, native language, family composition, and/or socioeconomic status; and
- technically adequate and validated for the purpose(s) for which they are used, including the provision of norms for minority children and children with physical disabilities.

Role of the School Psychologist

NASP encourages the adoption of the philosophy of "parents as partners" and families as the focus to promote assessments and interventions for young children that include full integration of parents and families into the assessment and intervention components of early childhood services. This mandates methods of naturalistic and systematic observation and information gathering, including work sampling procedures and the involvement of the family, home environment, daycare/preschool, and the community ecology as part of the comprehensive assessment to gather information and input from parents and caregivers. School psychologists should provide leadership to the multidisciplinary team in ensuring that all information gathered through the assessment is clearly understood by parents so that they can make fully-informed decisions about interventions for their children.

NASP also advocates for pre-service and in-service education for school psychologists and other professionals to address the following issues:1) normal as well as atypical developmental patterns of infants and young children; 2) practices, procedures, and instrumentation appropriate for screening and assessment of young children, their families, and their environments; 3) the selection of assessment techniques and utilization of findings from such assessments for the design, implementation, and efficacy evaluation of interventions; 4) and standards for early childhood psychological and educational assessment, including legal, ethical, and professional issues — all in the context of noncategorical service delivery for young children and their families.

Summary

NASP supports early childhood assessment practices that allow for accurate and fair identification of the developmental needs of infants, preschoolers, and young children and facilitate interventions that involve parents and other caregivers. Sound early childhood assessment should involve a multi-disciplinary team, including school psychologists with specialized training in the assessment of the young child, and who view behavior and development from a longitudinal perspective.

— Original version adopted by NASP Delegate Assembly, March 24, 1991

— Revision adopted by NASP Delegate Assembly, July 24, 1999

Annotated Bibliography

Gridley, Betty. (1995). Preschool Screening. In A. Thomas & J. Grimes (Eds.), Best practices in school psychology - III, (pp 213-226). Washington, DC: National Association of School Psychologists.

This chapter discusses the purposes of screening, the importance of parental input to appropriate screening practices, commonly used screening instruments, and practical activities for parents to do to facilitate development and learning in their child.

Gullo, Domnic, F. (1994). Understanding assessment and evaluation in early childhood education. Teachers College Press: New York, NY.

This book will help early childhood practitioners develop the essential understanding required for appropriate use of informal and formal assessment and evaluation information. Appendices contain a glossary of assessment instruments in early childhood education and a case study of an alternative assessment program.

Harrington, Robert, H., & Tongier, Jane. (1993). The compatibility between state eligibility criteria for developmental delays and available early childhood assessment instrumentation. Diagnostique 18(33), 199-217.

This paper discusses the results of a survey of 50 state consultants in early childhood special education in the United States to evaluate whether they perceive available developmental assessment instrumentation to be satisfactory for the identification of children with developmental delays in the 3 through 5 year old range. Results showed a need for instruments that facilitate parent involvement and a need for special norms for minority children and children with physical disabilities.

Katz, L. (1997). A developmental approach to assessment of young children. Champaign, IL: ERIC Clearinghouse on Elementary and Early Childhood Education.

This paper describes the concept of developmental appropriateness as it applies to the assessment of young children. The various purposes of assessing individual children are discussed. A match between plans, strategies, and assessment instruments and specific assessment purpose is mandated.

McClean, M.E. (1993). Practices for Young Children with and without disabilities: A comparison of DEC and NAEYC Identified Practices. Topics in Early Childhood Special Education, 13(3), 274-292.

This article summarizes practices that represent consensus of professionals and consumers in the field of early childhood education and early intervention relative to

useful practice. Practices identified through the work of the Division for Early Childhood (DEC) Task Force on Recommended Practice are compared with practices identified through the work of the National Association of the Education of Young Children (NAEYC). Similarities and differing emphases in the areas of inclusion, family involvement, assessment, program planning, curriculum and intervention strategies, service delivery models, and transition are discussed.

Neisworth, John. (1993). Assessment: DEC recommended practices. In DEC recommended practices: Indicators of quality in programs for infants and young children. (EC 301 933).

This paper lists practices recommended by the Division for Early Childhood for assessment in early intervention and early childhood special education programs for infant and young children with special needs and their early families. Introductory text examines the role of assessment, materials, and procedures used, and assessment principles, including: assessment must clearly identify developmental or behavioral objectives for change; assessment should help to select and guide treatment activities; assessment should contribute to evaluating intervention or program efficacy, assessment should identify goals and objectives that are judged as worthwhile and important; assessment methods and materials themselves should be judged as acceptable; assessment decisions must be based on a wide base of information; assessment batteries should contain several types of scales and include observation and interviews; assessment should include data and reports from parents and other significant individuals; and assessment must be done on multiple occasions.

Preator, Karleen, K., & McAllister, J.R. (1995). Assessing infants and toddlers. In A. Thomas & J. Grimes (Eds.), Best practices in school psychology - III, (pp775-788). Washington, DC: National Association of School Psychologists.

This chapter discusses basic considerations when assessing infants and toddlers, particularly under the requirements of federal legislation. The role of the school psychologist in working with the medical community and working with families as team members, as well as how to formulate assessment strategies with this population are also included.

SERVE: Southeastern Regional Vision for Education. (1991). Assessment in Early Childhood Education: Status of the Issue. Office of Educational Research and Improvement: Washington DC (ED 368 507).

This research brief argues that standardized testing has been over-used and misinterpreted, particularly when tests do not have established reliability and validity, when readiness tests are substituted for screening tests, and when tests are used for purposes they were not designed for. The National Association for the Education of the Young Child recommends that the most important consideration in evaluating and using standardized tests with young children is utility. Staff must be trained to recognize what specific tests can and cannot measure. Assessment systems that can be used cooperatively by parents and teachers is recommended. On-going evaluation should consist of criterion -referenced checklists, portfolio collection of the child's work, and summative teacher report forms.

Schweinhart, Lawrence. (July, 1993). Observing young children in action: The key to early childhood assessment. Young Children 48(5), 29- 33.

This article discusses practices such as performance-based assessment that are consistent with early childhood profession's process goals. Appropriate assessment practices are described including the use of observational methods that use anecdotal notes to complement assessments with developmental scales of established reliability and validity.

Shephard, L., Kagan, S., & Wurtz,E. (1998) Principles and recommendations for early childhood assessments. Washington DC: National Education Goals Panel. http://www.negp.gov

This booklet discusses best practices for assessment of young children considering their unique development, recent abuses of testing, and legitimate demands for clear and useful information. General principles of assessment included address benefits, reliability and validity, age level appropriateness and language, and parent role in assessment.

Early Childhood Care and Education

The National Association of School Psychologists recognizes that the futures of children are affected by many factors that occur early in life. One such factor is child care. Affordable, high quality early childhood care and education represent major needs of today's and tomorrow's children and families. Although the role of parents in children's care and upbringing remains of primary importance, most families need good child care options. The availability of high quality child care can benefit children, families, and society in terms of prevention of later learning and behavior problems, increased family self-sufficiency, and reduced costs for special education, welfare, and other public assistance.

The need for available, affordable, high quality early childhood care and education is supported by the following findings:

The majority of families in the United States have two parents or a single head of household who work outside the home because of economic necessity. A total of 7.7 million children under the age five are cared for during the day by someone other than a parent.

Most families need child care for their young children.

Many children are left unsupervised or in poor quality child care and may be vulnerable to psychological and physical risks that affect their development and safety. Most state and local regulations are limited and do not ensure that all child care programs are of good quality. About 70% of child care programs are of poor to mediocre quality. Kindergarten teachers are concerned that many children entering kindergarten are not prepared to participate in learning and social activities in the classroom. For school-age children, estimates indicate that only 33% to 52% of public schools offer before-school and after-school programs.

Many children and families in the United State are poor, even when both parents or a single head of household are employed. Poverty rates remain inexcusably high, especially for children. In 1995, 21% of all children lived in households below the poverty level. For single parent families, financial resources are often limited by multiple factors, including, in many cases, failure of non-custodial parents to pay child support.

Governmental funding for child care is inadequate. Many families, particularly low income and single parent families, cannot afford good quality child care. The typical yearly child care costs of $4,000 per child represents about 35% of the annual income for one parent working at minimum wage. Child care costs for infants are often higher than costs for toddlers and preschoolers, and many child care facilities cannot offer infant programs because of personnel costs. The high cost of child care results in a system in which low income families have few child care choices.

Inadequate child care options can have a broad and costly social impact by contributing to some parents' inability to acquire or maintain employment, inability to participate fully in job assistance programs, and higher absenteeism and lower productivity on the job.

It is recognized that families have a variety of child care needs, ranging from occasional in-home care to part-time or full-time out-of-home day care programs. The availability of affordable, high quality early childhood care and education can increase options for many families and provide benefits for children, families, and society. Research supports that higher quality child care programs have greater benefits than lower quality programs. Criteria for high quality child care include appropriate group size, adequate adult-child ratios, developmentally-appropriate curriculum, interactions with adults that are caring and stimulating for children, and comprehensive training and education of the staff.

Family involvement and other services for families can also be effective components of early child care programs. Positive outcomes of high quality child care and education programs are found for children and families of all income levels and can be pronounced for children and families of lower income levels. Examples of positive outcomes include the following:

Children

Participation in high quality early childhood programs can result in enhanced social and cognitive behaviors of young children, including increased self-regulation, verbalization, and competence in play and exploration.

Participation in high quality early childhood programs can have long-term educational benefits for children who are at-risk, including decreased placement in special education and lower failure and dropout rates.

Families

Participation in high quality early childhood programs, particularly those which provide family services, can result in factors such as more positive attitudes and modeling for parents regarding their children and themselves and better parent-child interactions.

Availability of affordable early childhood programs can promote increased family financial self-sufficiency.

Society

Availability of good early childhood programs can result in reduction to costs to society, such as costs related to special education and public assistance.

Availability of affordable early childhood programs can result in increased business productivity related to less turnover and absenteeism and improved job productivity in parents.

The need for early childhood care and education cannot be denied; furthermore, the availability of affordable, high quality child care can promote the success of children and their families. Most families in the United States need better child care programs and more options for the safe care of their young children. Therefore, the National Association of School Psychologists will:

1. Support programs and government funding that provide equal access to affordable, high quality early childhood care and education for all children and their families. Tax rebates and credits are not substitutes for comprehensive government support of accessible, well-designed programs.

2. Encourage the development, implementation, and ongoing evaluation of stringent standards for quality in child care programs, including:
   - developmentally appropriate curricula
   - appropriate group sizes and adult-child ratios, adequate staff selection, education, training, and compensation
   - appropriate physical facilities
   - responsiveness to individual differences and cultural and language diversity
   - appropriate access to special and related educational and health services and specialists, non-discriminatory practices.

3. Support and assist with the implementation of alternative forms of child care, including both in-home and out-of-home care, that meet the preferences and needs of families.

4. Support public regulation of all forms of out-of-home child care to ensure the quality of programs and safety of children.

5. Support comprehensive programs, beginning at the prenatal period, that include many services for parents and families and health, nutrition, education, and related services.

6. Support the implementation of programs that provide effective services and accommodations for children and families with special needs. Children with, for example, disabilities, developmental delays, chronic health problems, and childhood illnesses — and their families — should have equal access to high quality child care programs.

7. Encourage the establishment of partnerships between communities, schools, and other agen-

cies to provide accessible, comprehensive programs for young children. These programs should include subsidized child care services for infants and toddlers, pre-kindergarten programs in public schools and other settings, and well-supervised before-school and after-school programs.

8. Support and recognize the efforts of employers and corporations that have family-oriented policies and services, such as flex-time and on-site child care, and that afford families more options to meet the needs of their children and demands of their employment responsibilities. Men and women today are active in their parenting roles, and corporate and government policies that support parenting efforts reduce the needs for many families to rely on outside day care.

9. Encourage the development of programs that help families identify their child care needs and goals and evaluate the quality of child care programs in their communities.

10. Support continued research investigating factors related to child care, including effects of child care and family dynamics on children's development, methods of improving child care, effects of alternative forms of child care and family services, long-term benefits of child care for children and families, benefits of before-school and after-school programs, and economic benefits of child care for society.

Notes:

Data in this document were obtained from The State of America's Children: Yearbook 1997 by the Children's Defense Fund, Washington, DC; the special daycare issue of the journal Young Children (May, 1995); and "Extended Day Programs in Elementary and Combined Schools" by Robert Rossi and others (1996, ERIC Document Reproduction Service No. ED 395 721).

Parents and professionals who are interested in guidelines for selecting high quality child care programs are encouraged to read "A Good Preschool for Your Child" and other publications available from the National Association of the Education of Young Children, 1509 16th Street, NW, Washington, DC 20036, 800-424-2460 (www.naeyc.org).
— Adopted by the NASP Delegate Assembly, April 18, 1998.

Early Intervention Services

The National Association of School Psychologists is committed to serving the educational and mental health needs of all children and youth, including infants and young children. Research has shown that early intervention with infants, toddlers and preschool children with disabilities or who are at-risk for developmental problems benefits both children and families and accrues long-term cost savings to both school districts and society. Research also indicates that early intervention is most effective when the families of children are actively involved.

Many public schools are involved in the provision of special education and related services to young children as a result of federal and state legislation. The National Association of School Psychologists supports the expansion and improvement of services to children, toddlers, and preschool children who have disabilities or who are at-risk.

NASP encourages school psychologists and others to take part in efforts at the national, state, and local levels to advocate for high quality early intervention services from birth through age 5. We must work with school administrators, teachers, and families to develop comprehensive intervention programs that attend to total development, including cognitive, motor, self-help, socio-emotional, and communication skills, and actively involve parents and caregivers in intervention. Programs for young children should be based on their unique developmental needs. To ensure this we must:

- Promote and assist in "Child Find" or "Child Check" programs to identify children who may be at risk or have a disabling condition as early as possible and use only unbiased, reliable, and valid screening procedures with thorough follow-up assessment when appropriate.

- Use team approaches that include parents, families, and other caregivers as team members.

- Support the provision of services to children based on their individual needs without labeling or categorical procedures.

- Establish programs that include the child in natural environments whenever possible with appropriate assistance and consultation provided to the teacher.

- Actively and vigorously advocate for the provision of state and federal funding of early intervention programs and ensure that such funding allows for the careful evaluation of program outcomes to continually improve services to infants, toddlers, and preschool children.

We must also ensure that all service providers obtain professional development experiences that offer adequate preparation to serve young children and their families. University programs, professional organizations, public schools and other continuing education providers should be encouraged to provide professional development in these areas. Similarly, it is essential to establish a communication network among multiple service agencies that work with young children to ensure that effective and efficient collaborative services are provided to families.

Summary

NASP supports the establishment of comprehensive early intervention programs that begin as soon as possible, that actively involve parents and other caregivers in planning intervention and decision-making activities that serve children according to their unique needs in natural environments. NASP encourages governmental policies that work to meet these goals by providing funds to prepare professionals to serve young children, to support research in the efficacy of intervention approaches, and to increase effective collaboration among service agencies.

— Original statement adopted by the NASP Delegate Assembly, September, 1987
— Revision adopted by the NASP Delegate Assembly, April 10, 1999

Annotated Bibliography

Barnett, D.W., Ehrhardt, K. (1995). Early intervention design, In A. Thomas & J. Grimes (Eds.), Best practices in school psychology – III (pp 999-1008). Bethesda, MD: National Association of School Psychologists.
This chapter describes an alternative model to traditional placement of young children with disabilities in special education classes. The model discussed is guided by intervention design principles. This model involves ongoing parent-teacher problem-solving and intervention research.

Barrett, W.S. (1995). Long-term effects of early childhood programs on cognitive and school outcomes. The Future of Children, 5 (8), 25-50.
This article reviews the extent to which early childhood programs produce long-term benefits in children's cognitive development, socialization, and school success. Thirty-six studies of both model demonstration projects and large scale public programs are included. Results indicate that early childhood programs can produce large short-term benefits for children on intelligence quotient (IQ) and sizable long term effects on school achievement, grade retention, placement in special education, and social adjustment. Variability among programs exists perhaps due to funding and quality differences.

Campbell, F.A., Taylor, K. (May, 1996). Early childhood programs that work for children from economically disadvantaged families. Young Children, 51 (4), 74-80.
This article presents a study which surveyed how parents and children derived benefits from early childhood intervention programs for low income families. Such programs were found to provide appropriate and stimulating environments for young children and support the roles of parents. Participants have higher academic achievement and parents made positive changes in their own educational and employment levels. Child abuse and neglect also decreased.

Entwisle, D.R. (1995). The role of schools in sustaining early childhood program benefits. The Future of Children 5(3), 133-144.
This article discusses links between children's educational experience in elementary school and preschool settings which foster school success.

Frede, E.C. (1995). The role of program quality in producing early childhood program benefits. The Future of Children 5(3), 115-132.
This article analyzes early childhood program practices associated with effectiveness, with recommendations for policy, practice, and research. Effective programs were characterized by small class size with low teacher-student ratios; teachers who received support regarding reflective practice; long-lasting or concentrated interventions; ongoing, focused child-centered communication between school and home; and some curriculum content and classroom processes that are similar to traditional schooling.

Guralnick, M.J. (1991). The next decade of research on the effectiveness of early intervention. Exceptional Children 58(2), 174-183.
This article reviews the effectiveness of early intervention programs for children with developmental disabilities and for children at biologic risk. A general pattern indicating important effects of early intervention programs was noted. The ability of early interventions to minimize declines in development was identified as a significant outcome.

Gomby, D.S., Larner, M.B., Stevenson, C.S., Lewit, E.M., & Behrman, R. (1995). Long-term outcomes of early childhood programs: Analysis and recommendations. The Future of Children 5(3), 6-24.
This article provides an analysis of varying approaches to early childhood programs, including family-focused and child-focused. It concludes with recommendations for strengthening programs.

Effective Parenting: Positive Support for Families

The issue of how to provide appropriate and adequate parenting and discipline is of great concern to the educational community. Parents want well-behaved children. They want children to grow up to be contented, productive, responsible and self disciplined. Some children's behaviors are particularly challenging. Noncompliance and aggressive behaviors can bring out the worst in parents. Neither extremes of severe physical punishment nor limitless freedom will lead to long-term behavior change. School psychologists can help parents and caregivers develop practical and effective ways of disciplining and parenting children.

Discipline is a word that makes most people uncomfortable. It is typically used as a synonym for punishment, often for physical punishment. Discipline comes from the Latin word disciplina meaning instruction or teaching. Discipline, so defined, places the parent as the leader or teacher and the child as the student. A parent teaches values, good judgment, self control and caring for others through daily interactions with children. A parent sets limits and makes appropriate responses when a child does something that is in conflict with parental wishes. Effective parenting is safe, nurturing and instructive. Physical punishment can be harmful physically, emotionally and socially. It is usually ineffective because it does not teach appropriate behaviors, but teaches that hitting is acceptable in dealing with others. The National Association of School Psychologists supports the use of both verbal and nonverbal discipline practices that treat children with respect and shape children's behavior to encourage self-control and caring for others.

Preventing Behavior Problems

The National Association of School Psychologists believes that the following parenting practices help prevent the development of behavior problems in children:

- **Developing a trusting relationship**
  When children feel loved and respected by parents, they want to please them. Parents form trusting relationships with their children by exhibiting predictable and mature behavior and by protecting them from harm. Children who feel safe to make mistakes can learn to make better decisions in the future. A trusting relationship between parents and children is the cornerstone of effective discipline.

- **Developing appropriate expectations**
  Children need to understand the expectations their parents have for them, and they need to feel they can meet those expectations. These expectations must be appropriate for the child's age, temperament, and abilities. Children with learning or behavioral disabilities provide additional challenges to parents who must adjust their expectations to their child's unique needs and developmental patterns.

- **Setting limits**
  Limits can help children feel that the world is orderly, predictable and safe. Parents should consider the child's age and development when setting limits. Limits should be enforced consistently, and there should be clear and appropriate consequences when those limits are challenged.

- **Offering praise**
  Praising children's appropriate behavior will increase that behavior. Praise for specific behaviors is the basis for effective behavior management and should be used abundantly.

- **Effective Ways of Dealing with Misbehavior**
  The National Association of School Psychologists urges school psychologists to promote the development of effective discipline practices through the following interventions:

- **Early intervention programs**
  Home visitation programs for parents of newborns are an effective means of teaching and supporting parents in the difficult job of raising children. These programs provide parents with knowledge about normal development, realistic expectations, and how to keep babies healthy and safe. School psychologists can take a leadership role in developing community support for these programs.

- **School-wide programs to encourage effective discipline**
  Peer mediation, conflict resolution, and social skills training are all proven ways to help children develop responsible behavior. By incorporating regular communication with parents and opportunities for their participation, the effectiveness of these programs can be enhanced. School psychologists can bring leadership, research, and management skills to the development of these programs.

- **Consultation to parents**
  School psychologists have unique opportunities to talk with parents about discipline. In consulting with parents on children's learning and behavior problems, school psychologists can provide a) behavioral expectations appropriate to the child's age and development, b) alternative methods of behavior management such as time out, logical consequences, behavioral contracting, positive reinforcement, and privilege systems, and c) information about school and community resources such as parenting programs and professional help available beyond school services.

- **Parent education classes**
  School psychologists are in an ideal position to provide parent training using a variety of research-supported parent education programs. They can help parents develop positive approaches to behavior management including limit setting, use of praise and reinforcement, giving effective commands, reducing negative parent-child interactions, and using negotiating and mediation. School psychologists can also provide guidance for parents on school-related concerns such as homework, report cards, and peer relationships.

Summary

Raising self-disciplined children is one challenge among many facing parents in American society today. Parents have little or no training in effective parenting and they are often removed from extended families which have in the past been available to provide support and relief from the stress of child rearing. Discipline is too often viewed as "punishment" which may lead parents to equate more discipline with harsher punishments.

The National Association of School Psychologists encourages school psychologists and other professionals working with children and families to help parents develop effective discipline practices that are positive, safe, and instructive. School psychologists can help parents by supporting, developing, and implementing school and community programs which build healthy parent-child relationships and strengthen the home to enable children to become caring and responsible members of society.

— Adopted by NASP Delegate Assembly, April 18, 1998
Revision adopted by NASP Delegate Assembly, July 21, 2001
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Students with Emotional and Behavioral Disorders

The National Association of School Psychologists is committed to promoting effective services to meet the educational and mental health needs of all students. Emotional and behavioral disorders interfere with the acquisition of academic, vocational, and social skills and negatively affect adult adjustment. Therefore, early identification and intervention for students with emotional and/or behavioral problems is essential. Students with emotional and/or behavioral problems are frequently underserved by the educational and mental health systems of the United States. It is the position of the National Association of School Psychologists that children with these disorders should receive comprehensive assessment and intervention services in a collaborative family- and community-oriented fashion. Services to students with emotional and behavioral disorders should be sensitive to the need for the involvement and perspectives of persons from diverse cultural backgrounds.

Definition

The National Association of School Psychologists recognizes that children may exhibit emotional or behavioral problems for a variety of reasons, including developmental or environmental stressors and the presence of a longer -term disorder. These difficulties also exist along continuums of intensity, duration and frequency of occurrence. For the identification of students who are in need of specialized educational services in the school, the Association has endorsed the following definition of Emotional and Behavioral Disorders developed by the National Mental Health and Special Education Coalition:

- Emotional or Behavioral Disorder (EBD) refers to a condition in which behavioral or emotional responses of an individual in school are so different from his/her generally accepted, age appropriate, ethnic or cultural norms that they adversely affect performance in such areas as self care, social relationships, personal adjustment, academic progress, classroom behavior, or work adjustment.
- EBD is more than a transient, expected response to stressors in the child's or youth's environment and would persist even with individualized interventions, such as feedback to the individual, consultation with parents or families, and/or modification of the educational environment.
- The eligibility decision must be based on multiple sources of data about the individual's behavioral or emotional functioning. EBD must be exhibited in at least two different settings, at least one of which is school related.
- EBD can co-exist with other handicapping conditions.
- This category may include children or youth with schizophrenia, affective disorders, anxiety disorders, or who have other sustained disturbances of conduct, attention, or adjustment.

Assessment and Identification

The goals of the assessment process are to (a) gather relevant information about the student in the social and instructional environments, (b) assimilate the data to create a comprehensive picture of concerns, and (c) develop initial short and long term goals and strategies for intervention. It is important that the assessment identify both the strengths and needs of the individual and the people and systems with whom the student interacts. The assessment should insure that the child's difficulties are not primarily due to transient developmental or environmental variables, cultural or linguistic differences, or influences of other handicapping conditions. Referral for special services should not be used as a disciplinary action or an effort to resolve conflicts between individuals or agencies. The results of the assessment should provide information about the following factors:

- Specificity: The student's difficulties must be identified in a functional, objective and observable fashion;
- Environmental Factors: The relationship between the instructional, social and community environment and the specific difficulties demonstrated by the student. The assessment should identify those persons and systems that impact on the student;
- Strengths: Identify the strengths and resources of the student, family, teacher(s) and school setting;
- History: The duration of the difficulties, their relationship to specific developmental or situational stressors and previous attempts to resolve the difficulties;
- Intensity: The level of severity of the difficulties as they affect academic achievement, acquisition and execution of social skills, and/or interpersonal relationships within the school setting;
- Pervasiveness: The number of settings in which difficulties occur in the school, family or community;
- Persistence: The extent to which difficulties have continued despite the use of well-planned, empirically-based and individualized intervention strategies provided within lesser restrictive environments; and
- Developmental and cultural data: Identify the student's current developmental status. Determine the extent to which the student's behavior is different from the behavior expected for children of the same age, culture, and ethnic background.

Information should be obtained from a variety of sources that can provide data about the child's difficulties across various settings. Information from family members, community treatment providers, teachers and other school personnel, social service workers, combined with a thorough review of records may all prove useful. The assessment should gather information about a child's behavioral and emotional functioning, developmental history, areas of significant impairment in school adaptive behavior and achievement, impairment outside the school setting in areas such as vocational skills, and social skills or interpersonal relationships. Because biological and neurological factors may contribute to, cause or trigger problematic behaviors, consultation with medical care providers and consideration of relevant student and family medical history is important.

Formal methods for gathering information may include behavior checklists, standardized self-reports, structured interviews, rating scales, and other appropriate assessment techniques. Informal methods, such as behavior observation and analysis of work samples can also be useful. The potential effects of identifying a child as having an emotional or behavioral disorder necessitate the use of highly reliable and explicitly valid instruments. Norms should be representative, current and appropriate for the individual being assessed in terms of age, ethnicity, and gender. Functional behavior assessment procedures are recommended to gather information about the child's behavior in relationship to the instructional and social environment.

Intervention

Eligibility for services under the category of emotional/behavioral disorders should not automatically imply placement in a categorical special education program. Since emotional and behavioral disorders have multidimensional influences, interventions for children with these disorders must be multifaceted and comprehensive. Interventions should be planned by a team which includes the parent, the child whenever possible, the school psychologist and other student services personnel, teachers, administrators, and community service providers. Intervention plans should take into account the strengths of the child, the family, the child's teacher(s), and the school. Most schools exist primarily as an educational setting rather than a treatment setting, so children with significant emotional or behavioral disorders may frequently need interventions outside of those provided in the schools. Collaboration and coordination of services provided in the school and community will be required.

The following intervention approaches should be considered in developing a comprehensive school intervention plan for children and youth with emotional or behavioral disorders.

- **Individualized academic and curricular interventions.** Children with emotional or behavioral problems frequently achieve below grade expectations in academic areas. Academic difficulties often take a back seat to the student's behavioral difficulties. Students may benefit from adaptations to the curriculum, alteration of the pace of delivery, improvements to the instructional and organizational ecology, and instruction in learning and study skills.

- **Consultation with teachers and other support services.** Teachers may benefit from consultation directed at understanding the needs of the student and applying the most effective strategies to help the child improve behavior. Teachers will also benefit from the psychosocial support component of consultation in dealing with the frustration and isolation that often is present when working with children with significant problems.

- **Consultation and partnership with parents.** Parents will benefit from consultation directed at understanding their child's difficulties, developing and implementing effective behavior management strategies, and working collaboratively with other caregivers. The parent may also need assistance with negotiating the array of services available in the community.

- **Individual and group counseling**. Counseling may help the student improve social and school adjustment. Students frequently need assistance in dealing with the stresses in their environment, and understanding responsibility and self-directedness.

- **Social skills training.** Students with emotional and behavioral disorders frequently have deficits in the acquisition or execution of social skills. Training that is aimed at increasing social skills in the child's multiple environments is often helpful.

- **Crisis planning and management.** Crises should be anticipated and plans for dealing with crises should be a part of the student's intervention plan.

- **Specialized educational settings.** Children should be provided services in the least restrictive environment that meets the student's academic, psychological and social needs. Many students' needs can be effectively addressed through consultation with teachers and parents, short term counseling, and interventions in the regular classroom setting. School psychologists should encourage alternatives to categorical placement and help ensure that only those students who cannot be served appropriately in the regular classroom, based upon reliable and valid data, are considered for more restrictive programs.

- **Career, vocational and transitional planning.** Interventions addressing career exploration, the development of pre-vocational and vocational skills, and transition to the post- secondary education world should be included for all adolescents with emotional and behavioral disorders.

The Role of The School Psychologist

School psychologists' knowledge of learning, development and emotional functioning make them especially qualified to assess children suspected of having EBD and assist other members of the educational team in developing and executing comprehensive intervention plans. School psychologists can provide consultation, counseling, assessment, intervention programs, and crisis intervention. School psychologists can also be a resource for families and community providers.

Summary

Early identification and intervention for students with emotional and/or behavioral problems is essential to reduce the negative effects on academic and social adjustment. School psychologists play an important role in ensuring that these students receive comprehensive assessment and intervention services in a collaborative family- and community-oriented fashion.

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— Original statement adopted by NASP Delegate Assembly, April 18, 1993

— Revision adopted by the NASP Delegate Assembly, April 10, 1999

Gay, Lesbian, and Bisexual Youth

Youth who become aware of a minority sexual orientation within themselves during childhood or adolescence are at greater risk for a number of dangerous or harmful situations or activities. The most prominent risks include suicide, physical and verbal harassment, exposure to the HIV virus, and substance abuse. In addition, these youth are often rejected, emotionally and physically, by their families and may become homeless as a result of the disclosure of their sexual orientation. Society's attitudes and behaviors toward these youth render them invisible. As a result, this group suffers from a lack of resources to deal with the problems caused by the internalized sense of inadequacy and low self-esteem. Gay, lesbian, and bisexual youth who also have disabilities or are members of other minority groups have additional barriers to receiving appropriate education and mental health care within the school system and society as a whole.

The National Association of School Psychologists supports equal access to education and mental health services for sexual minority youth within public and private schools. This can be accomplished through: 1) education of students and staff, 2) direct counseling with students who are experiencing difficulties within themselves or with others due to actual or perceived minority sexual orientation, 3) advocacy for such youth within the school and the community settings, 4) support of research on evaluations of interventions and programs designed to address the needs of gay, lesbian, and bisexual youth in schools, and 5) support of programs for HIV prevention directed at gay, lesbian, and bisexual youth.

Violence and intimidation directed at sexual minority youth, whether aimed at an individual through direct harassment or at the entire group through antigay statements or biases, violate the right of these students to receive equal educational opportunities. NASP believes that school psychologists are ethically obligated to ensure that these students have an equal opportunity for the development of their personal identity in an environment free from discrimination, harassment, violence, and abuse. To achieve this goal, efforts must be made through education and advocacy for these youth to reduce discrimination and harassment against sexual minority youth by both students and staff.

Creating Safe Schools for Sexual Minority Youth

Schools must maintain campuses that are safe and conducive to learning for all students. NASP believes that efforts to create safe schools for sexual minority youth should include but not be limited to education of all students and staff, direct intervention with victims and perpetrators of harassment and discrimination of those at risk, and promoting societal and familial attitudes and behaviors that affirm the dignity and rights of gay, lesbian, and bisexual youth.

Education of students and staff. Because many gay, lesbian, and bisexual students choose not to reveal their sexual orientation for fear of harassment, other students and staff are often not aware of their presence. Staff and students who are aware and supportive may fear openly speaking out for sexual minority youth because of the possibility of being discriminated against themselves. Even among those who are aware of the existence of sexual minority youth in their school, many maintain misconceptions regarding these youth and may be unsure how to address their needs. NASP supports educating students and staff regarding the existence and needs of sexual minority youth through inservice training on the risks experienced by these youth, research relevant to these youth, and appropriate ways of addressing harassment and discrimination directed toward any student. In addition, issues pertaining to sexual orientation can be infused in the curriculum, such as presenting theories regarding the development of sexual orientation in a science class, reading works of famous gay, lesbian, or bisexual authors in a literature class, or discussing the gay rights movement in historical context with other civil rights movements in a social studies class. Sexual minority youth must also be educated to reduce unsafe behavior such as substance abuse and exposure to HIV. In addition, educating these youth can reduce the isolation they often feel as a result of perceiving themselves as invisible or as misunderstood.

Direct intervention with victims and perpetrators of harassment and discrimination. As with any instance of school violence, harassment and discrimination against sexual minority youth should be addressed both through applying consequences and educating the perpetrator and by supporting and protecting the victim. Both goals can be achieved through nonjudgmental counseling for students who have been victims of such harassment or who are questioning their sexual orientation and may become targets of harassment in the future by disclosing their status as gay, lesbian, or bisexual. Counseling and education should also be provided to the perpetrator to help prevent future episodes of harassment. Because school staff may, knowingly or unknowingly, discriminate against sexual minority youth, NASP believes that education and support for sexual minority youth must occur at all levels of schooling. This education should include students, teachers, support staff, and administrators and should stress that discrimination and harassment must be addressed regardless of the status of the perpetrator.

Promoting societal and familial attitudes and behaviors that affirm the dignity and rights within educational environments of gay, lesbian, and bisexual youth. By educating students and staff, school psychologists can help change negative or indifferent attitudes toward sexual minority youth. However, a much more powerful agent of change may be the example of the school psychologist who refuses to allow slurs or discrimination to occur and who is willing to provide services to all students regardless of sexual orientation or other minority status. Within their own schools and in society as a whole, school psychologists can promote attitudes that affirm the dignity and rights of sexual minority youth by removing biases from their own practice . They can also point out the actions or statements of other school staff who discriminate or neglect the needs of sexual minority youth and attempt to address these issues in a fair way. In particular, school policies should mandate fair treatment of all students and equal access to educational and mental health services within the schools. School psychologists can provide expert opinions and research-based information to assure that such policies are in place and enforced. Finally, school psychologists can encourage local, state, and national organizations to disseminate information to parents and other groups that need to be aware of the issues related to gay, lesbian, and bisexual youth in the schools.

Role of the School Psychologist

Because they work directly with students as well as staff and administrators, school psychologists are uniquely positioned to affect policies and practices within the schools. They can also teach by example. School psychologists can explicitly inform students that they are available to all students regardless of sexual orientation. In counseling sessions, they can be mindful that not every student is heterosexual and that sexual minority status can affect self-esteem and peer relationships. School psychologists can address issues of sexual orientation in inservice sessions as well. In presenting material on sexual harassment or discrimination, for example, they can take care to include examples and information involving sexual minority youth. School psychologists are also in a position to educate students on a number of issues related to high risk behaviors that are especially frequent among gay, lesbian, and bisexual youth, targeting both the school population in general and sexual minority youth in particular.

Summary

NASP recognizes that students who are of a minority sexual orientation, or are perceived to be, are at risk of a number of dangerous and destructive behaviors as well as harassment, discrimination, and low self-esteem. A successful program to address these issues educates both those who discriminate and those who are discriminated against because of sexual orientation. This education can occur on a number of levels: intervention with individual students, schoolwide inservice training, and modeling behaviors attitudes and behaviors by school psychologists in daily interactions with all students and staff. Any program designed to address the needs of sexual minority youth should also include efforts to educate parents and the community through involvement with other organizations committed to equal opportunity for education and mental health services for all youth. Schools can only be truly safe when every student, regardless of sexual orientation, is assured of access to an education without fear of harassment or violence.

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— Adopted by the NASP Delegate Assembly, April 10, 1999

HIV/AIDS

HIV/AIDS is a serious health and psychosocial crisis affecting not only adults, but children and adolescents as well. By the end of 1996, nearly 8,000 cases of pediatric AIDS (i.e., children under age 13) were reported by the U. S. Centers for Disease Control and Prevention (CDC). At least 90% of these involved infants born to mothers with HIV infection. Because treatment medications continue to improve, an increasing number of infected children are now living to reach school age, and public schools must prepare for their enrollment. With the greatest increase in annual incidence of HIV occurring among young adult females, it is expected that the number of infected children will grow dramatically. Furthermore, because the typical incubation period between HIV infection and symptomatic AIDS is 10 years, AIDS in young adulthood most often results from risk-taking behaviors during adolescence, a time when most individuals are in school. The National Association of School Psychologists believes communities must develop policies and procedures to address the HIV needs of children and adolescents in our schools.

Consequences of Pediatric HIV

Medical consequences. Eighty percent of children infected by their mothers develop full-blown symptoms of AIDS by two years of age. Because the virus interrupts in-utero brain development, the child with HIV often has extensive brain damage, and cognitive impairment increases as the disease progresses. Possible consequences include visual and auditory short-term memory difficulties, motor, speech, and language delays, as well as attention deficits. The child with HIV who lives to reach school age is likely to have serious academic problems.

In the case of adolescent infection, HIV affects a fully-developed, intact nervous system. Thus, the profound neurological deficits associated with pediatric HIV are not as apparent in adolescent cases, and the illness progresses at a much slower rate. Indicators of neurological involvement in adolescents and adults include general mental slowness, impaired concentration, mild memory loss, and motor skills impairment.

Psychoeducational consequences. Children with HIV present complex, individual differences regarding central nervous system (CNS) disease, as well as changing patterns of functioning across time. Impairments will differ greatly depending on the areas of the brain affected. However, these impairments are not unique to HIV disease, and children can benefit from existing early intervention and special education services for those with other developmental disabilities.

Psychosocial consequences. The psychological and social issues associated with HIV are compelling. Children with HIV have higher rates of depression and anxiety, and some have been labeled "autistic-like" because of severely withdrawn behavior. HIV forces the child to confront an abbreviated life of chronic illness, including fear of death, loss of abilities, social stigma, plus the likelihood of others at home with the same disease. To complicate matters, HIV is most prevalent in economically and socially oppressed communities; many infected children did not receive sufficient prenatal and postnatal care, and many had in-utero exposure to heroin, cocaine, alcohol, and/or nicotine.

The stigma associated with AIDS presents a major problem for the family of a child with HIV. The dread of ostracism can delay detection and efforts to access needed services. In addition, extended family members may fear catching the virus, remain distant, and offer little support. Thus, the resulting loss of the family's support network may further exacerbate the vulnerability of the child. Also, media accounts reveal that many parents are loath to have their son or daughter in the same classroom with a student with HIV, and intense emotional reactions in some communities have precluded more reasoned response. Recent data indicate that exposure to psychosocial stressors, such as those described above, can worsen the medical course of pediatric HIV. Role of the School Psychologist: In response to the HIV/AIDS crisis, school psychologists have two critical roles to play: they should be at the forefront both of prevention efforts to reduce the risk of infection and intervention efforts to meet the needs of all people in the school community affected by HIV/AIDS.

Prevention

Prevention efforts should include:

Safety precautions. All members of the school community—including school psychologists—should receive training in the CDC's Universal Precautions regarding exposure to blood and other bodily fluids. This training should occur regardless of the known presence of a student with HIV.

HIV/AIDS education for students. Schools must address all social and health problems relevant to a student's learning. NASP supports the CDC recommendation that age-appropriate AIDS education be dispensed at all grade levels to increase the likelihood that high-risk behaviors can be prevented before they become firmly established and highly resistant to change. NASP believes that an AIDS prevention curriculum should:

- be jointly developed by school psychologists, parents, teachers, school administrators, health educators, and appropriate community representatives;

- be infused into a more general health education program;

- be taught by regular classroom teachers in the elementary grades and qualified health educators in secondary grades;

- describe the benefits of sexual abstinence for young people and, for teenagers becoming potentially sexually active, should address ways to reduce the risk of HIV infection and other sexually transmitted diseases (including the judicious use of condoms);

- be guided by empirical demonstrations of program efficacy, monitored periodically to determine effectiveness, and modified as necessary;

- should include guidelines to address the epidemic of HIV/AIDS stigma. School-based curricular efforts typically stress prevention but often overlook social reactions to those already infected. NASP believes that the stigma surrounding HIV may be the most formidable obstacle in prevention education and recommends that psychological and social issues be infused throughout AIDS programming in the school.

HIV/AIDS education for school personnel and parents. NASP strongly believes that all school personnel should be educated about physical, psychosocial, and developmental aspects of HIV. School personnel and parents must recognize and address their own feelings and personal concerns regarding AIDS. HIV/AIDS Education can alleviate fears and, thus, promote tolerance of children with HIV. Furthermore, school personnel and parents who are knowledgeable about HIV/AIDS are in a better position to educate children and model appropriate behavior and attitudes. Given their training in psychological and educational principles, school psychologists are in an ideal position to implement HIV/AIDS training programs that emphasize prevention education and the psychosocial issues surrounding AIDS.

Intervention

Intervention efforts should include:

Confidentiality/disclosure. NASP recommends that only those who have a legitimate need to know be informed regarding a child's HIV status. In some cases, this may mean that classroom teachers and school psychologists will not have access to this information unless it can be documented that such disclosure will benefit the child and a parent has consented to its dissemination. Disclosure of a child's HIV status often reveals information about parental intravenous (IV) drug use, sexual orientation, and marital fidelity, thereby reflecting on the entire family system. Regardless of individual decisions regarding disclosure, school personnel must be formally prepared to handle the rapid spread of HIV-related rumors among students and staff.

Psychoeducational interventions. NASP recommends that multidisciplinary teams be involved in the assessment, intervention planning, and evaluation of children with HIV. Because of the progressive nature of the disease and deteriorating CNS functioning, NASP recommends that a longitudinal perspective be used when assessing children with HIV and when planning and evaluating interventions. This must include a comprehensive neuro-developmental assessment to determine areas of impaired functioning as well as data on family and developmental history, current cognitive functioning, psychosocial status, physical impairments, receptive and expressive language, attention, memory, perceptual-motor skills, academic skills, and adaptive behavior. NASP affirms the rights of children with HIV to a free and appropriate education in the least restrictive environment. Where special education services are needed, preschool children with HIV should qualify under IDEA due to high likelihood of developmental delay and school-age children should qualify due to cognitive and physical impairments.

Psychosocial interventions. NASP recommends that issues of social contamination and stigma be considered in all decisions regarding children with HIV and their families. Negative reactions from classmates and school staff must be addressed through proper education. School psychologists can reduce the child's social isolation by gaining greater knowledge of HIV/AIDS and by training others through in-service presentations designed to reduce the fear of contagion. NASP believes that schools must work to protect the child with HIV from the ostracism that frequently accompanies HIV/AIDS. Additionally, schools must recognize that AIDS affects entire families. Pediatric HIV typically indicates the presence of AIDS in other family members, and intense emotional strain, social stigma, and bereavement are experienced by all. NASP believes that schools must address family issues, and school psychologists should contribute to the school's response to HIV/AIDS in the community.

Therapeutic interventions. The health of the school-aged child with HIV is likely to decline over time, ultimately leading to a departure from school for hospital-based care. NASP believes that school psychologists must assist children with bereavement issues at school. These issues may include students' bereavement due to the death of a classmate, AIDS-related deaths of teachers and other school staff, as well as deaths of family members of school children. School psychologists should be knowledgeable about children's developmental differences in understanding death and specific helping behaviors to use in school. In addition, the school psychologist must recognize that the child with HIV is at risk for a disintegrated family. AIDS not only creates orphans, it causes other major stressors for children, such as witnessing the conspicuous deterioration of a loved one, moving to live with an extended family member, and/or legal battles regarding custody.

Research and training. NASP believes school psychology should contribute to the limited research base regarding psychoeducational and psychosocial consequences of HIV/AIDS among children and adolescents. This research is essential to better serve children with HIV, as well as to meet the needs of others indirectly affected by the illness and its stigma. School psychologists, especially those in academic settings, should also accept this mission by sensitizing colleagues and training graduate students about the complex issues surrounding HIV disease.

Summary

NASP recognizes that schools can no longer react to the urgencies of society by focusing exclusively on academics. The changing needs of the community, plus increased political and social pressure for health care reform, require that public schools also address the general health of its students and their families, including the impact of HIV/AIDS. School psychologists have a critical role to play in combating the devastating effects of an epidemic that touches the lives of too many children and families throughout the United States. NASP strongly urges its members to work with schools and communities to slow the spread of this deadly disease and to improve the lives of all those affected by it.

NASP believes that the use of safety precautions and school-based curricular interventions (e.g., AIDS education) are the best defenses against the spread of HIV/AIDS. Secondly, school psychologists must intervene in the lives of students and families affected by HIV/AIDS. Because of the complexity of issues and concerns, the school psychologist will only be one among many professionals who must respond to the needs of a child with HIV.

Original version adopted by NASP Delegate Assembly, April, 1988
Revision adopted by NASP Delegate Assembly, July, 1999

Home-School Collaboration: Establishing Partnerships to Enhance Educational Outcomes

The National Association of School Psychologists is committed to increasing the academic, behavioral and social competence of all students through effective home-school partnerships. Such partnerships involve collaboration among families, educators and community members to support students' educational and mental health needs. Unlike traditional "parent involvement" activities that emphasize passive support roles for parents, family-school collaboration involves families and educators actively working together to develop shared goals and plans that support the success of all students.

Benefits of Collaboration

When families are involved in education, there are significant benefits for students, educators, and families. Students demonstrate more positive attitudes toward school and learning, higher achievement and test scores, increased homework completion, and improved school attendance. Teachers report greater job satisfaction and higher evaluation ratings from parents and administrators. Parents experience better understanding of schools and improved communication with their children. Although it cannot be shown that family participation causes these benefits, these positive outcomes have been documented across families from diverse ethnic and socio-economic backgrounds.

Challenges of Collaboration

Despite these many benefits, family-school collaboration is very difficult to attain. Families and educators often differ in their expectations, goals, and communication patterns, sometimes leading to frustration and misunderstanding among students, families and educators. When these differences are not recognized and addressed, a lack of communication between home and school further divides and separates the two most vital support systems available to the student. Open communication is essential in order for educators and families to understand and respect each other's perspectives.

Establishing Effective Partnerships

THE ROLE OF SCHOOLS

Working together toward shared goals with shared power is the essential characteristic of effective home-school collaboration. The process requires ongoing planning, development, and evaluation. It also requires the allocation of adequate resources to assist families and teachers in fulfilling their partnership roles. Schools must take the lead in providing opportunities for collaborative partnerships to be developed and sustained through:

Providing a positive environment: It is the school's responsibility to provide a welcoming environment for all families. The school must send consistent messages to families that their contributions to forming effective partnerships are valued. Efforts are made to work collaboratively with all families, including those whose primary language is not English and those with limited literacy skills.

Supporting the efforts of families and educators: Family participation increases when such participation is promoted by the school. Schools can encourage collaboration by eliciting and understanding families' perspectives and expectations. Multiple options for participation should be made available, with the recognition that individual families will support their children in different ways. Schools can foster an open dialogue between home and school and should provide opportunities for families to have decision-making roles in school governance. Resources must be provided by the school to support the collaborative efforts of families and educators (e.g., release time for teachers to meet with families in the community, development of a family support room in the school).

Increasing the understanding of diversity: Families come in many shapes and sizes with multiple perspectives, expectations, and communication styles. Schools need to provide education to staff and families that encourages understanding and celebration of diverse family forms, cultures, and ethnicities. When schools and families make the effort to understand and educate each other, they often find more similarities than differences. Collaboration is based in the assumption that families, children, and educators are doing the best they can; efforts are made to understand others' behavior and intentions rather than judge them as right or wrong.

Promoting a view of education as a shared responsibility: Home-school collaboration is not an activity; it is a process that guides the development of goals and plans. When collaboration is characterized by open communication, mutually agreed upon goals, and joint decision-making, education becomes a shared responsibility. Together, families and educators can discuss expectations for student achievement and their respective roles in helping students meet these expectations; they can develop programs to promote effective home-school- community partnerships that support positive academic, behavioral and social competencies in all students; and they can engage in efforts to increase mutual respect, understanding, caring and flexibility among families and the school community. When problems arise, they are addressed jointly by families, students, and educators in a respectful, solution-focused manner.

THE ROLE OF FAMILIES

Child-rearing is both complex and difficult. Individual families face multiple challenges with unique sets of resources, skills, and preferences. Therefore, it is unrealistic and potentially damaging to family-school relationships to take a "one size fits all" approach to collaboration. Roles for families should be broadly conceived, but individually applied. That is, educators and families should work together to develop an array of opportunities for families to participate meaningfully in their children's education. Such opportunities should be offered with the knowledge that families will differ in their choices; these differences must be understood to reflect individual families' needs and preferences. Potential avenues for family participation may include, but are not limited to:

- Active involvement in school decisions and governance
- Participation at school as volunteers and committee members
- Encouragement of leisure reading with their children
- Participation in school functions, athletics, and other extra-curricular activites
- Monitoring homework completion
- Regular communication with school personnel about their child's progress
- Frequent communication with their children about academic and behavioral expectations and progress
- Participation as fully informed, decision-making members of problem-solving teams (e.g., IEP teams)
- Participation in adult educational opportunities offered by the school
- Active support of the school through communication, sharing resources and seeking partnership with educators

The role of the school psychologist

NASP encourages school psychologists to take part in national, state and local efforts to define parent involvement in education as true collaborative partnerships among homes, schools and communities. School psychologists need to advocate for increased home-school collaboration and identify strategies to encourage family participation by:

- Establishing school-based teams consisting of parents, educators and community members that assess needs, develop priorities and plans, and implement joint efforts to improve educational outcomes for students

- Serving as a liaison to support communication among homes, schools and communities
- Ensuring the meaningful participation of families in special education processes by providing decision-making opportunities for families in assessment, intervention, and program planning activities
- Providing direct service to families regarding strategies that promote academic, behavioral and social success across environments
- Working with administrators to ensure that sufficient resources are allocated to family-school collaboration efforts
- Pursuing and promoting continuing education on topics such as family interventions, multicultural issues, models of home-school collaboration and parent education

Summary

Home-school collaboration leads to improved student achievement, better behavior, better attendance, higher self-concept and more positive attitudes toward school and learning. Successful home-school collaboration is dependent upon educators, families and community members working together to understand each others' perspectives and to develop shared goals. NASP is committed to supporting collaboration among families, educators and community members to promote positive educational outcomes for all children and youth.

Resources

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Note

"Parent" is defined as any adult who fulfills a parenting role for a child; it should not be interpreted to mean only birth parents. "Educators" is used to emphasize that collaboration involves the entire school community, not just teachers.

— Adopted by the National Association of School Psychologists Delegate Assembly, April 1999.

Inclusive Programs for Students with Disabilities

The 1997 Individuals with Disabilities Education Act (IDEA 97) created significant educational opportunities for students with disabilities and established important safeguards that ensure the provision of a free, appropriate public education to students with special needs. NASP strongly supports the continuation and strengthening of this mandate. NASP also recognizes the need to continually evaluate the effectiveness of all aspects of our educational system and to promote reform when needed.

A Call for Inclusive Schools

NASP, in its continuing commitment to promote more effective educational programs for all students, advocates the development of inclusive programs for students with disabilities. Inclusive programs are those in which students, regardless of the severity of their disability, receive appropriate specialized instruction and related services within an age appropriate general education classroom in the school that they would attend if they did not have a disability. NASP believes that carefully designed inclusive programs individualized to meet the needs of students with disabilities represent a viable and legitimate option on the special education continuum that must be examined for any student who requires special education. Inclusive education is within the continuum of special education services, and must be based upon the individual needs, goals, and objectives determined by IEP teams.

Potential Benefits

Some of the benefits of inclusive programs include:

- typical peers serving as models for students with disabilities;
- the development of natural friendships within the child's home community;
- learning new academic and social skills within natural environments, facilitating generalization of skills;
- students with disabilities existing in "natural" proportions within the school community;
- all students learning to value diversity; and
- general education classrooms that are better able to meet the needs of all students as a result of additional instructional resources, staff development for general and special educators, a more flexible curriculum, and adapted instructional delivery systems.

Developing Inclusive Programs

In advocating for the development of these programs, NASP takes the position that:

- Inclusive programs must provide all the services needed to ensure that students make consistent social, emotional, and academic gains.
- General education teachers, special education teachers, school psychologists, other related services providers, and parents must collaborate to ensure appropriate services for all students and to ensure that all programs are based upon a careful analysis of each student's needs. Decisions regarding services must be made on an individual child basis.
- Outcome-based data on inclusive programs must be collected to ensure that students with and with-

out disabilities are making consistent educational progress. Ongoing empirical examination and further research are needed.

- All educators and administrators involved in implementing inclusive programs must participate in planning and training activities. When developing inclusive programs, adults with disabilities serving as experts and/or advocates, in addition to the students themselves, need to be included as much as possible.

- Knowledge and skills in effective collaboration, curriculum adaptation, developing supportive social relationships, and restructuring special services are but a few of the areas in which skills are needed.

- Preservice and inservice training based upon the needs of the staff involved in planning these programs is essential. The active involvement of general educators and administrators in staff development is critical for successful inclusion.

- School districts with limited resources may have difficulty meeting the needs of all students, particularly those with low incidence or severe disabilities. It may be necessary to provide planning and training for the provision of reasonable accommodations to students with low incidence or severe disabilities attending their neighborhood schools.

The Role of the School Psychologist

School psychologists can provide effective leadership in the development of inclusive programs. School psychologists have training and experience in collaborative consultation, behavioral and academic intervention design, curriculum adaptation, modification of learning environments, program evaluation, peer mediated learning, facilitating friendships, and other issues critical to effective inclusive programs. Because of this expertise, school psychologists are in a unique position to assist schools in assessing student needs, reallocating existing resources, and restructuring service delivery systems to better meet the educational and mental health needs of all students. School psychologists can foster the development of inclusive schools by:

- gathering and providing information regarding the strengths and needs of individual students;

- providing meaningful support and consultation to teachers and other educators implementing inclusive programs;

- distributing articles and research to fellow educators and district committees responsible for educational restructuring;

- leading or serving as members of groups that are evaluating or restructuring education programs;

- planning and conducting staff development programs that support inclusion;

- offering training and support to teachers, students and families;

- developing new resources through grant writing and collaboration with other community agencies, and other activities;

- providing information on needed changes to legislators and state and federal policy-makers; and,

- collecting and analyzing program evaluation and outcome based research.

Concerns Regarding the Traditional Special Education System

Certain aspects of traditional special education include a number of problems that create unintended negative outcomes for students:

- A referral and evaluation system that does not function as originally intended. Some of the weaknesses of this system include:

- Over reliance upon a classification system of disability categories that lacks utility and reliability for this purpose, and lacks acceptance by many parents and professionals.

- A lack of empirical research showing that students with mild disabilities grouped by category learn differently or are taught differently.

- Inequities in implementation of the least restrictive environment and access to general education curriculum provisions of IDEA 97. Data suggest that the restrictiveness of many special education placements is not based upon the severity of students' disabilities, but may instead result from the configuration of the service delivery system that is available in the community.

- Concerns that traditional special education programs are not effective in terms of learner outcomes.

- Overly restrictive special education programs housed in separate schools or "cluster" sites that result in social segregation and disproportionate numbers of students with disabilities being grouped together. For example, some students, especially those with more severe disabilities, must attend separate schools to receive special services, rather than being provided appropriate services in his/her neighborhood school. Many parents and professionals feel that it is inherently inequitable that some students must leave their neighborhood schools and communities to receive appropriate services. Although neighborhood schools may be the best decision for most students, decisions must be made on an individual basis.

Changing our Schools

NASP recognizes that the traditional framework of special education policies and regulations is often incompatible with inclusive programs. Consequently, NASP joins with the National Association of State Boards of Education in calling for a fundamental shift in the policies which drive our compensatory education system. Changes are suggested in:

- The system used to identify and evaluate students with special needs. This should be made more reliable and less stigmatizing. Noncategorical services (Rights without labels) may be appropriate for inclusive education.

- The traditional special education funding system. The link between funding and placements must be severed. Many aspects of the funding system are driven by labels and program locations rather than by student needs. Special education funding systems must be based on the provision of services to students and not on the maintenance of programs, facilities, personnel, etc.

- School improvement planning. School improvement /restructuring plans must include students with disabilities. The integration of general and special education issues must be reflected in building and district level improvement plans. This requires collaboration and staff development for both general and special educators in order to address the needs of all students.

- NASP recognizes that the shift toward more inclusive schools will require profound changes in the ways in which schools are organized. We are committed to working with parents, other professional groups, and state and national policy-makers in creating new funding and regulatory mechanisms that promote effective programs within neighborhood schools and ensure that students with special needs continue to receive appropriate resources. We endorse a process of planned change that involves all stakeholders in research, planning, and training to ensure that our nation's schools can attain excellence for all of our children.

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Interagency Collaboration to Support the Mental Health Needs of Children and Families

Recognizing the link between children's mental health and academic performance, the National Association of School Psychologists is committed to the development of partnerships between schools and other child-serving agencies to build a coordinated, comprehensive system of care to meet the educational and mental health needs of children and their families. Children with mental health problems are often unable to receive the services that they need due to limited resources and lack of coordination between agencies. Collaboration among agencies is essential in order to create a comprehensive service delivery system based on child and family strengths that reduce barriers to learning.

Fragmentation, poor communication, and inefficient and ineffective practices among schools and community agencies result in gaps in and duplication of services. Research shows that collaborative efforts improve working relationships between schools and community mental health, juvenile justice, and other child-serving agencies and result in improved outcomes for children and their families. In addition to improved service delivery, streamlining of services through collaboration avoids duplication, provides for a continuum of service delivery options, and is cost-effective. Increased academic performance, improved attendance, increased engagement in academic activities, and fewer disruptions to the learning environment are a few of the many outcomes documented when systems design a continuum of services that includes prevention, early intervention, and treatment of severe and chronic mental health problems.

The NASP mission, Strategic Goals and Training and Practice Standards support the role of school psychologists as mental health service providers, as well as their active involvement in building collaborative relationships and promoting public policies that impact the education and mental health of children. Most school psychologists provide prevention and intervention activities, such as staff and parent consultation, individual counseling, group counseling, and staff and parent training. In advocating for such services to support children's mental health needs, school psychologists should promote communication with relevant agencies to facilitate collaborative efforts that enhance healthy outcomes.

The Role of the School Psychologist

Schools serve most children/youth in familiar settings that are often less stigmatizing than other community agency settings; therefore, schools have become the key focal point for coordinated service delivery. School psychologists are at the forefront of mental health service delivery in the schools and are uniquely trained to help bridge the gap between schools and community agencies. With training in both education and mental health, school psychologists provide an important perspective for systems reform. School psychologists are trained or have the resources available to function as change agents who utilize skills in systems consultation and in advocacy of public policies to support the education and mental health needs of children. School psychologists facilitate communication and collaboration with students and school personnel, community professionals, agencies, families, and schools, which result in positive academic, behavioral, and mental health outcomes for children/youth.

School Psychologists as Partners: As a partner on interagency and school teams, school psychologists provide services within the prevention/intervention continuum, such as:

- Consulting with school staff and/or parents regarding the social/emotional/behavioral needs of children/youth.

- Consulting with administrators, teachers and other staff regarding a coordinated plan of psychological services for students as mandated in IDEA.
- Consulting with school staff regarding school-wide approaches to address student behavior and learning.
- Consulting with school staff to develop positive behavior supports and interventions.
- Consulting with parents regarding the implications of their child's academic and behavioral challenges and strategies to support these challenges.
- Coordinating referral of children/families to other service agencies, to provide for mental health needs.
- Assisting in the needs assessment and design of school safety plans.
- Assisting in the development and implementation of crisis plans.
- Providing staff development on topics such as positive behavior supports and intervention, prevention of violence, and crisis intervention.
- Providing resources, training, and information to school staff and/or parents regarding characteristics, intervention, and treatment of learning and behavior disorders and mental health problems.
- Screening, evaluation, identification and referral for appropriate services for children exhibiting emotional disturbances.
- Conducting functional behavior assessments to assist in the development of positive behavior supports.
- Assessing, planning and implementing appropriate academic and other educational supports.
- Measuring progress and improvement both for individuals and also for programs.
- Monitoring progress of students in collaboration with parents and private practitioners.
- Providing interventions for students with chronic behavior/emotional needs.
- Providing classroom-based instruction in pro-social skills.
- Providing small group and/or individual counseling for such issues as social skills and anger control.

School Psychologists as Facilitators of Collaboration: School psychologists can foster collaborative relationships that facilitate the creation of a system of care by engaging in the following activities:

- Identifying (mapping) the available resources in the community and at the school.
- Developing a working relationship with practitioners in other agencies.
- Developing a common vision for collaborative outcomes with community practitioners and develop a common philosophy of service delivery.
- Helping agencies develop an understanding of each community agency's role and how each agency can expand services or eliminate duplication that may exist.
- Working with community agency staff and parents to identify needs of families in the community.
- Working with community agencies to develop written policies and procedures for managing issues of confidentiality and referral between agencies.
- Promoting interagency agreements and understanding of legal/ethical issues that exist between school-based policies/practice and agency-based policies/practice
- Developing clearly defined outcomes of the collaboration effort such as increased student attendance, decreased suspensions, and improved academic performance.

- Providing cross-agency training by inviting agency personnel to participate in inservice programs focused on developing complimentary services and effective collaboration.
- Inviting community agency personnel to present information to the school staff regarding their services and ways to access their resources.
- Providing information to parents about the services that school psychologists can provide, as well as services available from community agencies.
- Providing information to school administrators, other agencies, and policy makers on the training and role of school psychologists in providing mental health services.

Collaboration Support

NASP has a vested interest in fostering the collaborative approach and in promoting the benefits of school-based services and programs, both in the workplace and in the policy arena. NASP will provide assistance and support to school psychologists in obtaining the resources necessary to effectively facilitate collaborative efforts. To further encourage collaborative partnerships, NASP requests other child-serving providers and organizations to join in efforts to establish working relationships that enhance service delivery and to address children's needs. The goal of collaborative relationships among schools, agencies and parents is to create a comprehensive and integrated system of care to support the mental health needs of children.

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— Adopted by NASP Delegate Assembly, July 21, 2001

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Mental Health Services in the Schools

"Children are the messages we send to a time we will not see."

— Neil Postman

The National Association of School Psychologists recognizes that school success is facilitated by factors in students' lives such as psychological health, supportive social relationships, positive health behaviors, and schools free of violence and drugs. A collaborative and coordinated effort is needed among schools, families, and communities to meet the needs of children and adolescents so that as a result of their years in school, students will have achieved as many positive academic and behavioral outcomes as possible. One of the most important of these positive outcomes is psychological competence, a set of skills and attitudes that lead to positive mental health and a strong sense of well-being.

To that end, NASP advocates the inclusion of effective, comprehensive mental health services in the schools. Mental health services must be included in school reform efforts in order to help students overcome barriers to learning, many of which are the result of poverty, family difficulties, and/or emotional and social needs.

School psychologists are at the forefront of mental health service delivery in the schools. Throughout the United States, school psychologists provide mental health services including - assessment, counseling, mental health and behavioral consultation services and crisis intervention in partnership with teachers, parents, school administrators, and other members of the school community to assist in developing effective interventions to service students in need. School psychologists are also serving students directly through individual and group counseling services, and as members of school based mental health programs.

The Need for Mental Health Services in Schools

The effect of mental health on school success, and achievement is well documented. Factors such as healthy self-esteem and positive relationships are important to students' success. Research emphasizes the importance of positive student behaviors and attitudes as being elements in promoting effective schools.

Unfortunately, in today's society, too many students are unable to benefit from educational experiences due to environmental or personal difficulties. Statistics regarding poverty, family disintegration, violence and substance abuse are staggering indications of barriers to learning and school success.

Addressing Student Mental Health Needs Within the Context of the Schools

Schools are the logical point of entry to increase the efficacy of mental health services to children and adolescents. School based services can be designed to address students' mental health needs using a range of service options from prevention to intervention. The key to making mental health services effective is to ensure that they are comprehensive, coordinated, and accessible to students and families.

Although providing for the mental health needs of students is a community responsibility, there are several advantages to providing such services in the schools:

1. Schools are the optimal place to develop psychological competence and to teach children about making informed and appropriate choices concerning their health.

2. Schools are the best place to integrate and coordinate the efforts of teachers, families, mental health service providers, and administrators to foster the mental health of students.

3. Accessible, affordable mental health services are most easily provided in the educational setting. Problems of transportation, accessibility, and stigma are minimized when such services are provided in schools.

The Role of School Psychologists as Mental Health Service Providers in the Schools

School psychology is a distinct profession that integrates a base of knowledge and skills in providing psychological services with training in learning, child development and an understanding of educational systems. School psychologists are well-qualified to provide comprehensive, cost-effective mental health services given this broad-based training and experience. School psychological services include but are not limited to: consultation, counseling, assessment, the development of prevention or intervention programs, behavioral plans and crisis intervention. School psychologists also assist schools, administrators, teachers, families, and other community agencies in direct and indirect service delivery, systems level planning, and program evaluation.

Given the Significant Need for School Psychological Services

1. NASP advocates coordinated and comprehensive school-based mental health services emphasizing prevention, education, and early intervention. Intervention services provided by school psychologists are a cost-effective means by which to deliver mental health services to children, adolescents, families and communities.

2. NASP advocates for increased federal, state and private funding for mental health services in the schools.

3. NASP supports and works to ensure that mental health services are as available as other health services with parity in insurance coverage.

4. NASP supports school reform that eliminates barriers to students' learning and includes school psychological services as an integral component of effective schools. NASP promotes culturally competent school psychological services that are sensitive to the individual needs of students, their families, and their communities.

5. NASP considers the following to be hallmarks of exemplary mental health programs in the schools and supports inclusion of the following factors. The mental health program:
   a. Integrates theory, research, and practice;
   b. Is based on an ecological-developmental model;
   c. Demonstrates a collaborative-participatory model;
   d. Makes a continuum of mental health services available; and
   e. Evaluates program acceptability, integration, and efficacy.

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— Adopted by the NASP Delegate Assembly, July 1998

Minority Recruitment

One of the purposes of the National Association of School Psychologists is to serve the mental health and educational interests of all youth. In order to effectively accomplish this task, NASP resolves to work actively to increase the number of culturally and linguistically diverse school psychologists who work directly with children and who are trainers in school psychology programs. NASP believes that efforts to recruit culturally and linguistically diverse school psychologists can take many forms, and is a challenging task. Essential actions include but are not limited to the use of established recruitment procedures that are known to be successful, membership assistance in recruiting culturally and linguistically diverse individuals into the profession, the development of training programs in geographically relevant areas, and the use of research to develop more effective recruitment strategies.

Cultural and Linguistic Diversity Among the School-Age Population

Underscoring the need to recruit culturally and linguistically diverse school psychologists is the rate at which the culturally and linguistically diverse school-age population is growing. Through natural population growth and immigration, the overall U.S. population is forecast to increase by almost 50% by the year 2050. The Caucasian (White Not of Hispanic Origin) population will experience the smallest proportional increase. This is in sharp contrast to the large proportional increase forecast for the African-American, Asian/Pacific Islander, Hispanic, and Native American populations during the same time period.

Recent immigration patterns alone provide an example of the diverse student population served through the public schools. During the past decade, more people have immigrated to the United States than any other time since the turn of the century. In addition to the cultural diversity and unique life experiences common to individuals entering the United States from other parts of the world, the vast majority of children are from home countries which have a primary language other than English. This combination of cultural and linguistic diversity necessitates unique skills on the part of school psychologists, which are developed by participating in appropriate training programs.

Cultural and Linguistic Diversity Among School Psychologists

There are disproportionately few culturally and linguistically diverse school psychologists available to serve both regular and special education students. In order to provide appropriate psychoeducational services to such a heterogeneous population, it is critical that a greater number of culturally and linguistically representative school psychologists be recruited to work with children and serve as trainers in school psychology programs. As the proportion of culturally and linguistically diverse students in the total school population increases, the need for representative school psychology service delivery will be increasingly magnified. NASP, therefore, remains committed to the recruitment of members from culturally and linguistically diverse groups and recommends the implementation of the following strategies:

Strategies for Increasing Minority Recruitment

NASP advocates for the use of established recruitment procedures related to enrollment in training programs that are known to be successful, including:

- Flexible admission standards. Flexible multifaceted admission standards provide greater strength to the admission process than single, rigid criteria.

- Flexibility during the admission process may include strategies such as the recognition of various professional and life experiences prior to the pursuit of an advanced degree as a complement to entrance examination requirements and/or grade point average requirements.

- Flexible training options. Training programs may endeavor to meet the needs of working students by offering part-time training opportunities for some of the student's graduate education. In addition, some key coursework may be offered in the evenings or during the summer. This may serve to encourage individuals who would be qualified candidates, such as teachers currently working in the schools, to consider re-training in the field of school psychology.

- Financial support. Comprehensive financial support may take the form of waived or reduced application fees, the availability of special financial aid including grants, fellowships, and/or loans, and the use of special scholarships for eligible culturally and linguistically diverse students (e.g., NASP Minority Scholarship).

- Active outreach efforts. Outreach efforts targeting culturally and linguistically diverse populations may include the use of special brochures, media advertisements, personal contacts, and the use of current and past student ambassadors.

NASP encourages its membership to assist school psychology training programs in recruiting culturally and linguistically diverse group members into the profession through:

- Mentoring. NASP members may serve as mentors for students interested in pursuing careers in education and psychology. Through this grass roots effort, many talented high school and undergraduate students may become informed about the profession of school psychology and the various duties and requirements involved.

- Nominating. NASP members are encouraged to nominate talented students to regional and national school psychology training programs.

- Advocating. NASP members may choose to serve as advocates for talented students throughout the application and admission process. This may be accomplished through letters of recommendation, a willingness to provide information regarding various application procedures, and ongoing support and encouragement.

NASP supports the development of school psychology training programs in geographically relevant areas. In order to increase the total recruitment pool and provide educational opportunities for a greater number of individuals, cities and states with a sufficiently diverse population are encouraged to develop training programs which focus on the recruitment and training of culturally and linguistically diverse students.

NASP also encourages school psychology training programs to conduct research and develop the most appropriate strategies to recruit, train, and graduate greater numbers of culturally and linguistically diverse individuals from their programs.

Summary

NASP is firmly committed to the recruitment of greater numbers of culturally and linguistically diverse individuals. Culturally and linguistically diverse school psychologists are needed to serve the mental health and educational interests of all youth and to train the practitioners of tomorrow. NASP believes that the application of recruitment strategies which remove barriers from the path of prospective students and involve both association members and school psychology training institutions are those which will prove most effective.

— Revision adopted by NASP Delegate Assembly, July 25, 1998.

Pupil Services: Essential to Education

Schools are unique learning environments staffed by specialists, including pupil services teams, who are charged with the design and delivery of programs to facilitate formal and informal development of desired abilities and to help remove obstacles that may prevent success. With the new century, along with the traditional tasks, pupil services specialists are faced with the challenges of designing programs to ensure equal access and service delivery to all children in our society, and responding to a broad societal concern about the overall quality of life. The National Association of School Psychologists (NASP) recognizes that school psychologists play a key role in the delivery of these services.

Definition of Pupil Services

The professional education team has long included specialists from various helping professions. Historically, pupil services and school populations have been shaped by community, state, and federal mandates, including the original Elementary and Secondary Education Act (ESEA, U.S. Congress, 1965), the amended Individuals with Disabilities Education Act (IDEA, U.S. Congress, 1997) and initiatives in Section 504 of the Rehabilitation Act of 1973 (PL 93-112; U.S. Congress, 1973) with components infused into the Americans with Disabilities Act (ADA; U.S. Congress, 1990). These changes have resulted in an increased diversity in the services that students receive, the way in which services are accessed, and the professional fields responsible for the delivery of these services. Such progress has provided fertile ground for the emergence of a variety of pupil services specializations.

The pupil services team is typically defined to include school psychologists, school counselors, school social workers, school health professionals, and other qualified professional personnel involved in providing assessment, therapeutic (e.g., counseling, speech/language), educational remediation, strategy instruction and general curriculum support, program coordination and accountability, and other necessary services as part of a comprehensive program to meet student needs. The organization of these specialists results in highly functional transdisciplinary teams working with special and regular education teachers, families, students and community agency personnel to provide the most successful educational opportunities for all students.

Objectives for Pupil Services

The following are critical elements in design and delivery of pupil services programs:

1. Programs should be developed from identified needs of students, recognizing potential contributions from all stakeholders, including parents, special service providers, teachers, administrators, and other support personnel.

2. Effective programs necessitate a comprehensive approach, including a focus on developmental, preventative, and remedial activities which facilitate the educational process for students.

3. Effective programs recognize that not all services can be provided in the school and include effective linkages with various community resources.

4. Accountability through consistent, continuing, and effective program evaluation is crucial in both development of effective programs and insuring continuing community support.

Role of the School Psychologist

The role of the school psychologist in the delivery of pupil services is unique in the provision of psychological evaluations. School psychologists are also prepared, along with other pupil service specialists, to deliver direct intervention services, case consultation, program service development and monitoring, and system wide preventative activities. It is essential that a coordinated team approach to the delivery of these overlapping services be instituted in all of our schools. While federal and state regulations have shaped what professional services must be provided, the boundaries between the specialty areas have often been blurred. The school psychologist in collaborative effort with other specialists is proactive in advocacy for support of programs to meet special student needs and for coordinated delivery of such programs.

Summary

NASP supports the concept that effective delivery of pupil services is essential to education and recognizes that meeting the diversity of student needs requires a transdisciplinary team approach utilizing trust, open communication, mutual respect, and ongoing collaboration of professionals from each specialty area. Because all pupil services are related, the sometimes overlapping areas of expertise can serve to strengthen the overall program and be an ongoing resource for consultation and support. Regardless of the administrative structure employed, it is the coordination of pupil services that becomes most essential when meeting the commitment to serve this country's school-aged youth, and enhance the communication of the critical importance of the services to the constituencies which provide financial support.

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— Original version adopted by NASP Delegate Assembly, 1989

— Revision adopted by NASP Delegate Assembly April 10, 1999

Racism, Prejudice, and Discrimination

The National Association of School Psychologists is committed to promoting the rights, welfare, educational, and mental health needs of all students. This can only be accomplished in a society which ensures that all people, including children and youth, are treated equitably without reference to race or ethnicity. NASP believes that racism, prejudice, and discrimination are harmful to children and youth because they can have a profoundly negative impact on school achievement, self-esteem, personal growth, and ultimately the welfare of all American society.

A discussion of multicultural issues requires a definition of terms. The following definitions apply to the terms used in this position statement (adopted from the Multicultural Project for Community Education, Cambridge, MA and Washington D.C.).

Prejudice: Prejudice is an attitude, opinion, or feeling formed without prior knowledge, thought, or reason.

Discrimination: Discrimination is differential treatment that favors one individual, group, or object over another. The source of discrimination is prejudice, and the actions are not systematized.

Racism: Racism is racial prejudice and discrimination supported by institutional power and authority used to the advantage of one race and the disadvantage of other race(s). The critical element of racism which differentiates racism from prejudice and discrimination is the use of institutional power and authority to support prejudice and enforce discriminatory behaviors in systematic ways with far reaching outcomes and effects.

Research indicates that many students who are the victims of racism, prejudice, and discrimination: develop feelings of worthlessness; deny membership within their own group; identify with the dominant group; develop prejudice against other ethnic minorities; achieve less in school and have lower aspirations for the future; and drop out of school in increased numbers (e.g., Hale-Benson, 1990; Mabbutt, 1991; Taylor, 1996).

As a nation, we must be committed to replacing racism, discrimination, and prejudice with attitudes and behaviors that reflect fairness and cooperation. Children must learn tolerance and cooperation, and this learning must begin at an early age. The National Association of School Psychologists urges all educators and community leaders to:

- promote policies to establish and maintain racial, cultural, and linguistic diversity among school personnel;
- take an active role in teaching students tolerance and pluralistic values, using
- strategies such as cultural sensitivity training, cooperative learning, and conflict resolution training;
- discuss racism, prejudice, and discrimination with students of all ages;
- provide students with an opportunity to learn about culturally, ethnically, and linguistically diverse groups;
- promote and employ curricula which give students the opportunity to explore issues of self identity; and
- develop programs for all students designed to promote self-respect and respect for others.

Role of the School Psychologist

As mental health professionals, school psychologists must understand the effects of racism, discrimination, and prejudice, how they impact their professional work, and how they affect every facet of the lives of children and adults in America. The practice of school psychology must be informed by this knowledge and understanding, and NASP supports all efforts, at both a preservice and inservice level, to ensure that this occurs. NASP believes that school psychologists have a critical role to play in making schools culturally sensitive environments and directly supports this endeavor through the NASP Minority Scholarship, the promotion of racially, culturally, and linguistically sensitive training standards, and through .the development of Tolerance Curriculum materials. Ultimately, the welfare of all students and our nation is at stake.

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— Originally adopted by NASP Delegate Assembly, April 1993

— Revision adopted by NASP Delegate Assembly, April 1999

Rights Without Labels

The Rights Without Labels concept has been developed to address problems associated with the classification and labeling of children as "handicapped" for educational purposes. This classification establishes certain legal rights for children and parents, often including funds for schools offering specialized services.

Problems permeate this system: unreliability of classification; lack of instructional relevance for some classifications; exclusion of children from regular education; and the stigmatization of classified children. Moreover, removing these classifications and labels to return a student to regular education has proved very difficult.

The Rights Without Labels guidelines presented here have special significance for children with academic and/or behavioral difficulties who are frequently classified as learning disabled, educable mentally retarded or behavior disordered/emotionally disturbed. Our intention, however, is to apply these guidelines to as broad a range of exceptionalities as is feasible and in no way to diminish opportunities for even the severely/profoundly handicapped student to be served in settings with their non-handicapped peers.

The Rights Without Labels guidelines are based on the assumption that it would be desirable at this time to conduct programs wherein efforts are made to serve children who have special needs without labeling them or removing them from regular education programs. Research indicates that several factors are critical to the success of such experimental programs.

Pre-referral Screening/Intervention

Attempts must be made at the very outset to ameliorate educational difficulties through the use of pre-referral screening/intervention methods conducted by regular school personnel with the support of resources typically limited to special education (i.e., school psychologists, teachers, social workers, speech therapists, etc.). This benefits all children, especially those experiencing educational problems, while helping to identify students with characteristics consonant with legal definitions of handicapped conditions. Such practices will engender an abiding respect for students' rights under the law not to be evaluated in the absence of genuine suspicion of a handicap.

Curriculum Based Assessment

Secondly, identification and evaluation methods must include curriculum based assessment procedures. Research demonstrates these procedures provide reliable measures of student performance and produce relevant information for instructional planning. Most importantly, they fulfill the evaluation protection criteria set out in P.L. 94-142. The primary purpose of these procedures is not to classify or label children, but rather to identify specific curriculum and instructional deficits and strengths in order to provide a framework to develop appropriate educational programs. Individualized Education Programs (IEPs) continue to be required, as well as related services provided in accordance with current legal guidelines.

Special Resources in Regular Settings

The traditional array of special education supplementary aids, services and resources (including teachers/aides) are available to children only outside the regular classroom. Our goal is to broaden the classroom situation within which special education resources can be used and to reverse the practice of moving handicapped students to special education situations outside regular classes and schools. Instead, special education resources can be transferred into the non-categorically identified students' regular classroom setting.

RIGHTS WITHOUT LABELS GUIDELINES

These guidelines are stated positively as principles for programs which professionals, advocates and parents may wish to examine. The checklist format is provided for use in developing experimental programs in local or state systems.

GUIDELINES FOR ASSURING RIGHTS WITHOUT LABELS IN REGULAR/SPECIAL EDUCATION PROGRAMS

I. ASSURANCES: Any proposed alternatives non-categorical program or system shall:

A. Ensure that the fundamental rights afforded handicapped students and their parents under P.L. 94-142 are maintained and safeguarded. These include, but are not limited to:

1) Standards for fair and unbiased identification and evaluation of children who would qualify as "handicapped" in a categorical system.

2) Individualized Education Programs (IEPs) for all students who would otherwise qualify under a categorical system.

3) Specialized instruction and related services for students who would otherwise qualify under a categorical system.

4) Least Restrictive Environment (LRE) standards in determining educational placements.

5) Appointment of surrogate parents when appropriate.

6) Non-discriminatory discipline procedures.

7) All timeline standards governing the above practices and procedures.

8) Parental rights in the identification, evaluation, IEPs and placement of students who would otherwise qualify under a categorical system.

9) Due Process rights for parents and students who wish to pursue concerns/complaints regarding educational evaluations, programs and placements.

10) Local advisory boards to assist (LEAs) in planning for the provision of appropriate educational services.

B. Provide parents of handicapped students with an alternative to selecting a traditional categorical approach to classification.

C. Provide full disclosure of the non-categorical system to parents including an explanation of resources, services and rights that will be afforded students in this system.

II. GENERAL QUALITY OF ALTERNATIVE PROGRAM: Any proposed non-categorical program or system shall:

A. Employ pre-referral screening/intervention measures and utilize evaluation procedures that include curriculum based assessments.

B. Employ methodology known to be associated with effective teaching/learning (for example, provide students with orderly and productive environments, ample learning/teaching time, systematic and objective feedback on performance, well sequenced curricula, etc.).

C. Focus attention on basic skills as priority areas for instruction (for example, language, self-dependence, reasonable social behavior, mathematics, health and safety, etc.).

D. Provide procedures to identify and respond to the individual needs of all students, and in particular, those who may need modifications in their school programs.

E. Provide for special education aids, services and resources to be delivered in regular education settings.

III. ASSESSMENT OF OUTCOMES: Any proposed non-categorical program shall:

A. Have an objective methodology for assessing the educational progress of students in major curriculum domains (including academic, social, motivational and attitudinal variables) and for comparing such progress with results in traditional programs.

B. Contain and utilize a cost-benefit analysis to compare costs with traditional programs.

IV. TEACHING STAFF AND FACILITIES: Any proposed non-categorical program shall:

A. Include instruction and services by teachers and staff who are qualified in accordance with current state certification standards.

B. Include a delivery system that provides continuing staff development responsive to the training needs of the teaching staff and administrative personnel who will be implementing the requirements of the non-categorical program.

C. Include appropriate instructional materials and other resources.

D. Include assurances that funding levels and personnel allocations will not be decreased during the experimental period or as a result of successful alternative service delivery.

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*To provide these assurances, it is assumed that as part of the experimental procedures, it would be common to conduct a dual classification system, whereby, for example, a student who might be classified as "learning disabled" in a traditional system would actually be so identified. Although the student's record would reflect the traditional classification, the student would be considered in need of "supplemental services" (i.e., regular and special education services) for purposes of his/her participation in the non-categorical program. Only by such a dual system could assurances concerning "rights" be offered and safeguarded. Over the long term, the traditional classification system might be modified if all stake-holders are satisfied about the new procedure.

Preventing and Responding to School Violence

Introduction

National studies report that districts have recently reduced violence on school campuses as demonstrated by a 70% reduction of school-associated deaths between 1992-93 and 2000-01 and a 42% reduction of student-reported weapon possession between 1991 and 1999. Despite these encouraging trends, whenever violence occurs in schools, it challenges assumptions that society holds about the role of schools. When parents leave their daughters and sons at the schoolhouse door each day, they trust that their children will be cared for and safe. They believe that schools will minimize exposure to all sources of harm, be it tragic campus shootings, chronic bullying, name-calling, sexual harassment, or social exclusion. When violence occurs at school, trust is violated, which thereby diminishes schools' efforts to attain their primary mission of educating all students. For this reason, the National Association of School Psychologists (NASP) believes that schools must continue to strive to be havens of safety and security that permit all youth to thrive academically, socially, and emotionally.

NASP also recognizes that all forms of violence at school threaten the physical, psychological, and emotional well being of students and school staff. Schools must ensure that no harm comes to anyone on school campuses at any time. To achieve this goal, efforts need to be made to eliminate obvious aggressive and illegal acts. Other behaviors are not illegal - such as mean-spirited teasing - but may nevertheless damage students' development and negatively affect school climate.

NASP further recognizes that teachers and other educators, including school psychologists, have the potential to be resources for children and youth who experience multiple, chronic risk factors in their lives. The relationships that these children form with adults in the school setting can help them cope with challenges and avoid violence perpetration and/or victimization. It is important to consider the role of such attachment and bonding in promoting and enhancing school violence prevention.

Role of the School Psychologist

NASP supports school psychologists' initiative to assume a leadership role in encouraging schools to develop comprehensive approaches to violence reduction and crisis response. School psychologists are trained to:

- implement prevention and intervention programs designed to reduce aggressive behaviors among youths and others;
- consult with school staff implementing social skills programs and other programs designed to teach peaceful ways to resolve conflicts;
- provide group process and consultation to help schools form effective safety planning teams;
- participate in needs assessment and program evaluation at the school and district levels;
- counsel victims of violence; and
- help communities respond to crises spawned by violence.

In addition, school psychologists are the mental health professionals who can conduct informative socioemotional assessments of students involved with aggressive behavior at school. These are essential components of a comprehensive school safety plan. To help ensure that school psychologists are well prepared to provide leadership in school violence prevention, NASP supports efforts to ensure that school psychologists have the requisite knowledge and skills to design and implement violence prevention and school crisis preparation programs.

Creating Safe Schools

NASP vigorously promotes and supports efforts to help rid America's schools of the destructive influences of violence in all of its forms. Efforts to reduce school violence can be successful when they use multiple strategies selected to be appropriate for each school's needs; these include:

Creating School-community safety partnerships. No school district or individual school can implement a comprehensive, school violence prevention program without engaging in a systematic planning process to understand its school safety problems and opportunities. School psychologists assist schools by helping them to engage in such systematic team building and problem identification process.

Establishing comprehensive school crisis response plans. Meeting the needs of victims appears self-evident. However, research shows that most schools respond to antisocial and aggressive behaviors through disciplinary action against the perpetrators, while neglecting to provide appropriate support and counseling for victims. Children who have been the victims of school violence perceive schools as failing to protect them, and as a result they may feel threatened and unsafe while at school. These children display many characteristics common to individuals with Post-traumatic Stress Disorder, including blocked learning and symptoms of serious emotional problems. NASP strongly supports the availability of counseling and recovery programs for the victims of school violence.

Enhancing classroom climate, school climate and promoting positive school discipline and support. Some programs may not focus on specific violent behaviors directly but seek to change the conditions that may be conducive to violent acts. Individualized instruction and remedial support where needed can reduce academic failure and frustration. Programs to decrease racism and other forms of intolerance have the effect of also increasing appreciation of diversity and improve levels of trust among the school community. Such programs can also decrease violence by creating a climate of acceptance and understanding and improve the quality of the relationships among and between students and staff. While school violence may engender a desire to discipline the aggressors harshly, NASP encourages school personnel to balance disciplinary responses with efforts to promote cooperation, positive social skills, and peaceful means of resolving conflicts. Addressing school violence must go beyond increasing campus security and punishing students who have violated school rules. A comprehensive campaign to end school violence must also encompass efforts to increase support, trust, and caring among students and staff.

Using nonstigmatizing school violence prevention programs. Attention to early behavioral and emotional distress signals from students will help to ensure that students are provided prevention and support services as early in their school careers as possible - in most cases prior to the need for extreme disciplinary response. NASP does not support assessment procedures that claim to identify or profile students as being at risk of committing acts of violence because of the potential for high false identification rates (many students have emotional or behavior difficulties, but relatively few commit serious violent acts). As alternatives to practices such as corporal punishment and ceasing educational services, NASP promotes the use of positive methods of school discipline such as solution-focused approaches that include the application of behavior management principles and strategies.

Promoting anti-violence initiatives that include prevention programs for all students. NASP advocates the use of a multi-level model of school violence prevention such as discussed in the federal document, *Safeguarding our Children: An Action Guide.* At the most general level, interventions include school-wide violence prevention programs. These activities encourage all students to experience positive emotional development and to use non-violent means to resolve their personal conflicts. NASP encourages programs designed to teach peacemaking, peer mediation, and conflict resolution. Such programs are natural bridges between interventions that focus on individual change and those seeking to change the ecology of the school.

Providing support for students exhibiting early warning signs of disruptive behavior. Not all students respond to school wide programs, therefore, violence prevention efforts also must target students who have shown aggressive behavior at school. As a result of public demands to respond punitively to threats of violence at school through "zero-tolerance" programs, schools often focus disciplinary actions on the perpetrators of violence. Policies that focus only on catching and punishing violent behaviors fall far short of the goal of creating a safe school environment. These efforts have recently been associated with the development of procedures to identify students thought to be "at risk" of committing violent acts. NASP supports schools efforts to thoughtfully consider a broad range of risk indicators as illustrated in the *Early Warning, Timely Response: A Guide to Safe Schools* document as well as contextual (family, school, and community) that may influence a student's behavior.

Intervening with students who experience significant school behavioral adjustment problems. Schools must also make efforts to modify the behavior of students who have engaged in or are at risk of engaging in violent behavior. NASP strongly supports systematic efforts to implement strategies that teach social skills and self-control to children and youth as part of a school-wide plan to create a safe and healthy climate conducive to learning. In addition, for many of these students, the complex problems they face require the coordination of interventions across school and community agencies. Schools alone cannot address the myriad needs of these students. For this small proportion of students, with these complex needs, cooperative agreements will be needed with community mental health, juvenile probation, child welfare services, alcohol and drug treatment, and other youth and family-serving agencies.

Summary

NASP recognizes that violent acts at school, although rare, have complex origins and profound consequences. Efforts to reduce violence at school, therefore, must be multi-faceted. A successful program will ensure the ongoing safety of all students and staff both by creating conditions that discourage violence and by responding quickly and effectively when violence occurs. To be truly comprehensive, however, violence reduction programs must influence student attitudes toward violence, teach students and school staff effective conflict resolution skills, and create a climate that promotes tolerance and understanding among students and staff. School safety programs are most effective when integrated with other violence prevention efforts involving local law enforcement, juvenile probation, public health personnel, and other parent and community groups. When an entire community commits to reducing violence, the health and well being of its children and youth are enhanced.

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— Original version adopted by NASP Delegate Assembly, July 1996

— Revision adopted by NASP Delegate Assembly, July 21, 2001

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Sexuality Education

Education lasts a lifetime and plays a significant role in the decisions we make about our lives. Learning about sexuality is a normal and healthy part of this lifelong process. NASP believes that a comprehensive sexuality education program helps young people develop positive views of sexuality, gives them accurate information regarding health and sexuality, and assists them in acquiring the skills to make healthy decisions regarding their own sexuality now and in the future.

Sexuality education occurs in many settings and requires a collaborative effort by parents, teachers, religious leaders, and medical personnel. The common goal should be to give young people the information they need to develop their own values, to enhance their self-esteem, to provide insight into their relationships with members of both genders, and to better understand their obligations and responsibilities to themselves and others.

Comprehensive Sexuality Education

NASP believes sexuality education should begin early in life and should follow a curriculum that:

- Is part of a comprehensive, K-12 school health education program;
- Is developmentally appropriate with respect to content and instructional methods;
- Respects the diversity of values, beliefs, and cultures within the community;
- Has the support of the school administration, the governing school board, and the broader community;
- Addresses a wide range of factors related to sexuality such as: AIDS and other sexually transmitted diseases; the abuse of alcohol and other drugs and their effect on personal health; pregnancy prevention; parenting skills; reproductive and sexual health care; accurate information about sexual orientation; healthy decision-making; and effective communication skills, including the skills necessary to refuse unwanted sexual contact;
- Includes the prevention of high risk behaviors. Research shows that successful prevention programs provide both accurate information and instruction in the skills necessary to cope with difficult problems and situations. Abstinence Plus programs, which impart accurate information and comprehensive social skills training in addition to sending a strong abstinence message, have been shown more effective than Abstinence Only programs; and
- Is taught by qualified teachers who have had specialized training in human sexuality and who receive ongoing training and supervision by qualified supervisors.

Role of the School Psychologist

With their training in human development and behavior, psychological and learning processes, and educational systems, school psychologists can play an important role in the integration of appropriate sexuality education into the school system. Recognizing that the issue of sexuality education is controversial, NASP encourages all school psychologists to become informed about the issues and to use their expertise to facilitate effective sexuality education and to provide appropriate related services to high-risk students.

In collaboration with other support and educational personnel, school psychologists can:

- Assist in developing, implementing and evaluating a sexuality education curriculum that is appropriate for the ages, developmental levels, and cultural identities of the student population;

- Provide counseling for students on issues related to sexuality as needed;

- Facilitate parental and community involvement in sexuality education in the home, school, and community;

- Help teachers, administrators, and parents articulate their feelings and concerns regarding sexuality education; and

- Respond to those in the broader community who are concerned about sexuality education and its impact on student behavior.

NASP believes comprehensive sexuality education is essential to preserve the health of our children. In the absence of this education, students base their decisions regarding sexual activity, abstinence, birth control, dating, and relationships on the misinformation provided them by peers, television, movies, and what they read in novels and the popular press. Without the intervention of responsible and caring adults, the decisions they make may stem from myth or ignorance. Given the lifelong impact that decisions regarding sexuality can have, NASP believes that comprehensive sexuality education should be an integral part of the school curriculum.

— Adopted by the NASP Delegate Assembly, July 1997.

Student Grade Retention and Social Promotion

The academic underachievement of American school children is a widespread and increasingly severe problem. The recent movement to mandate academic "standards" and ensure accountability has rekindled public debate on the use of retention as a means to remedy academic deficits. While some professionals and organizations are calling for an end to "social promotion," evidence from research and practice highlights the importance of seeking alternatives that will enhance educational outcomes.

The National Association of School Psychologists promotes the use of interventions that are effective and research-based and discourages the use of practices which, though popular or widely accepted, are either not beneficial or are harmful to the welfare and educational attainment of America's children and youth. Through many years of research, the practice of retaining children in grade has been shown to be ineffective in meeting the needs of children who are academically delayed. However, despite the evidence, published estimates indicate that the rate of retention has increased by approximately 40% over the last twenty years, with as many as 15% of all American students held back each year and 30%-50% held back at least once before ninth grade. Furthermore, the highest retention rates are found among poor, minority inner city youth. Given the frequent use of this ineffective practice, NASP therefore urges schools and parents to seek alternatives to retention that are more beneficial to children and address more effectively the specific instructional needs of academic underachievers.

Research Findings

The research on the effects of retention is extensive. While admittedly of varying quality, the preponderance of the research demonstrates:

IN ELEMENTARY SCHOOL:

- Some groups of children are more likely to be retained than others. Those at highest risk for retention are male, Black or Hispanic; have a late birthday, delayed development and/or attention problems; live in poverty, in a single-parent household or have parents with low educational attainment; or have changed schools frequently.

- While delayed entry and readiness classes may not hurt children in the short run, there is no evidence of a positive effect on either school achievement or adjustment. Furthermore, by adolescence, these early retention practices are associated with numerous health and emotional risk factors.

- Retention is generally associated with poorer academic achievement when groups of retained children are compared to groups of similar children who are promoted. The most notable deficit for retained students is in reading, the primary academic problem for which students are retained.

- Initial achievement gains may occur during the retention year, but the consistent trend across many research studies is that achievement gains decline within 2-3 years of retention such that retained children either do no better or perform more poorly than similar groups of promoted children. This is true whether children are compared to same-age or same grade students who were promoted.

- Children who are the most delayed are most likely to be harmed by retention. Particularly at the first grade level, large percentages of retained children are either subsequently retained again or are placed in special education.

- Retention appears to have no significant impact on overall school adjustment as measured by self-esteem inventories; however, retention is associated with significant increases in behavior problems as measured by behavior rating scales, with problems becoming more pronounced as the child reaches adolescence.

AT THE SECONDARY LEVEL:

- Students who were retained or had delayed kindergarten entry are more likely to drop out of school compared to students who were never retained, even when controlling for achievement levels. The probability of dropping out increases with multiple retentions. Even for single retentions, the most consistent finding from decades of retention research is the high correlation between retention and dropping out.
- Retained students have increased risk of health-compromising behaviors such as emotional distress, cigarette use, alcohol use, drug abuse, driving while drinking, use of alcohol during sexual activity, early onset of sexual activity, suicidal intentions, and violent behaviors. Furthermore, students who themselves were not retained but who attend schools with a higher proportion of old-for-grade students are also at risk for increased substance abuse.

IN ADULTHOOD:

- Grade repeaters as adults are more likely to be unemployed, living on public assistance or in prison than adults who did not repeat a grade.

Benefits of Retention

The research on retention at all age levels and across studies is based on group data. While there may be individual students who benefit from retention, no study has been able to predict accurately which children will gain from being retained. Under some circumstances, retention is less likely to yield negative effects:

- Students who have positive self concepts, good peer relationships, and have adequate skills to catch up easily are less likely to have negative retention experiences.
- Students who have difficulty in school because of lack of opportunity for instruction rather than lack of ability may be helped by retention. However, this assumes that the lack of opportunity is related to attendance/health or mobility problems that have been resolved and that the student is no more than one year older than classmates.
- Students who perform within one standard deviation of the mean on achievement tests and do not have serious social, emotional or behavioral deficits might benefit from retention, although such students are not likely to be referred for retention as their needs can generally be met with minor modifications in instruction.
- Retention is more likely to have benign or positive impact when students are not simply held back, but receive specific remediation to address skill or behavioral deficits. Such remediation is also likely to benefit students who are promoted.

Alternatives to Retention/Social Promotion

Both retention and social promotion are failed practices. Neither repeating a grade nor merely moving on to the next grade provide students with the supports they need to improve academic and social skills. NASP encourages school districts to consider a wide array of well-researched, effective and responsible strategies in lieu of retention or social promotion. Specifically, NASP recommends that school districts:

- actively encourage parents' involvement in their children's schools and education
- adopt age-appropriate and culturally sensitive instructional strategies that accelerate progress in all classrooms
- establish multi-age groupings in classrooms where teachers have been trained to work with mixed-age and ability populations
- provide effective early reading programs such as Success for All, Reading Recovery and Direct Instruction

- implement effective school-based mental health programs such as The Primary Mental Health Project
- use teacher assistance teams to identify specific learning or behavior problems, design interventions to address those problems, and evaluate the efficacy of those interventions
- appropriately provide special education services for children with educational disabilities
- offer extended year and extended day programs
- implement tutoring programs with peer, cross-age, or adult tutors
- establish full-service schools to provide a community-based vehicle for the organization and delivery of educational, social and health services to meet the diverse needs of at-risk students.

For children experiencing academic difficulties, neither grade retention nor social promotion offer effective remedies. If American schools are committed to helping all children achieve academic success and reach their full potential, we must discard these practices in favor of programs and interventions designed to address the factors that place students at risk for school failure. NASP encourages school psychologists to take an active part in helping their school districts develop effective alternatives to retention and social promotion.

Supporting resource

Dawson, P. (1998, June). A primer on student grade retention: What the research says. *Communiqué*, 26 (8), 28-30.

—This revision was adopted by the NASP Delegate Assembly on April 17, 1998.

Three-Year Reevaluations for Students with Disabilities

The National Association of School Psychologists is committed to promoting standards of best practice in conducting three-year reevaluations of students in special education programs, as well as supporting compliance with the requirements of P.L. 105-17 (1997 Amendments to the Individuals with Disabilities Education Act). NASP supports, and federal regulations allow, a flexible approach to three-year reevaluations based on the unique needs of the student and the specific questions that need to be answered. The reevaluation is an opportunity to critically examine the current educational environment and evaluate student progress, instructional needs, the Least Restrictive Environment, and long term goals. As such it requires the collaborative involvement of the multi-disciplinary team, including teachers, the family, and the student.

Developing A Three-year Reevaluation Plan

Federal guidelines and professional standards call for meaningful, individualized, multifaceted reevaluations which serve the best interests of students. The purposes and specific questions for reevaluation should guide the selection of assessment methods and instruments. Three broad purposes of reevaluation are:

1) **Accountability.** The effectiveness of the student's individual education program should be analyzed. Reevaluations should include a review of progress by examining data on past and present levels of performance. Data may include grades, school discipline records, curriculum- based measures, and norm-based measures. Lack of progress should stimulate IEP changes in curriculum, instructional techniques, behavioral strategies, or the educational environment or a reassessment of the nature of the disability.

2) **Planning.** Evaluation information should be utilized to determine whether modifications to the special education services received are needed in order for the child to meet the annual goals and participate, as appropriate, in the general curriculum. Factors such as behavior, current skill levels as compared to regular education peers, and communication skills should be considered. Future needs must be addressed, especially at transition points in the child's educational program. Transition planning might address confirmation of disability, community living skills, vocational training, or plans for post-secondary education.

3) **Qualification.** Under IDEA it is assumed that the initial identification of an educational disability and qualification for special education services are valid processes. Therefore the emphasis of reevaluation need not be to reconfirm eligibility, but to gauge the effectiveness of interventions and determine future programming needs. IDEA clearly states that additional formal assessments to reconfirm the disability are not required unless a change in disability is suspected or the parent requests assessment in areas of development. An evaluation must be conducted, however, before determining that a child no longer has a disability. If, at the time of the reevaluation, the student's progress suggests that he or she may no longer have a disability requiring special education, the assessment should address the student's needs and programming when exiting special education.

In reviewing existing data to determine the components of the reevaluation for the individual student, parental input is essential. Further, the team should consider factors that influence the choice of specific assessment procedures including the student's age; degree of language proficiency in English; severity and nature of disability; progress in school; years of support from special education; and the consistency of the results of previous evaluations. Existing information, such as classroom-assessments, norm-based measures, curriculum-based measures, observations by related service professionals, and interviews with teachers, family and student may provide critical data from which the team can determine the questions to be addressed by the reevaluation. Finally, the reevaluation should emphasize the collection of functional data—data readily linked to instructional strategies. The outcome of the reevaluation should be a better understanding of the student's current levels of performance and needed modifications in instruction to match the goals of the general education curriculum to the extent feasible.

Role of the School Psychologist

NASP encourages school psychologists, school administrative units, and state education agencies to develop flexible and meaningful approaches to reevaluation. School psychologists have unique training and expertise in gathering and reviewing data, and their knowledge is crucial in the selection of appropriate, reliable, and valid assessment procedures.

As part of the IEP team, they should assist in coordinating a review of the student's progress that considers the efficacy and appropriateness of the student's current program. School psychologists should work with parents, student, and teachers in determining future program needs, especially at transition times. Program changes or the continuation of special education services should be addressed when the student has made significant progress in remediating or compensating for learning or behavioral deficits.

School psychologists should assist in developing appropriate instructional strategies and behavioral interventions so that students with disabilities may successfully be educated in their least restrictive environments with optimal exposure to the general education curriculum.

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— Original version adopted by NASP Delegate Assembly, April 1998

— Revised version approved by NASP Delegate Assembly, July 1999

VII

Appendix VII — University Training Programs in School Psychology

Alex Thomas
Miami University

There are approximately 220 institutions currently providing school psychology training that culminates in a minimum of a state credential to practice school psychology. Many of the programs also have program approval and/or accreditation at the national level. This appendix provides pertinent information for university training programs that is current as of December 2001. Individuals wishing to obtain information may contact the individual university program through the available website, e-mail, phone, or postal address provided.

On the following chart, the following abbreviations are used:

APA = American Psychological Association

Accred. = Accreditation

D = Doctoral

DA = Degrees awarded

EN = Student enrollment

FA = Percentage of students receiving financial assistance

NN = NASP/NCATE

S = Specialist

YG = Approximate yearly graduates

School/Address/Web site	*Accred.*	*Director*	*Dept.*	*Application Info.*	*Prim. Faculty*	*EN*	*FA*	*DA*	*YG*
—ALABAMA—									
Auburn University 2084 Haley Center Auburn, AL 36849 www.auburn.edu/academic/education/ccp/au_ccp		Joseph A. Buckhalt Ph: 334-844-2875 Fax: 334-844-2860 buckhja@auburn.edu	Counseling & Counseling Psychology	Dept of Counseling & Counseling Psychology, ATTN: Admissions	Joseph Buckhalt, Elizabeth Brazelton	S 3, D 6	50%	M.Ed., Ed.S., Ph.D.	S 1, D 2
University of Alabama Professional Studies, PO Box 870231 Tuscaloosa, AL 35487-0231 www.bamaed.ua.edu	S: NN D: NN	jeff Laurent Ph: 205-348-7575 Fax: 205-348-0683 jlaurent@bamaed.ua.edu	Educational Studies in Psychology, Research Methodology, and Counseling	Graduate School, University of Alabama, Box 870118 Tuscaloosa, AL 35487-0118	Jeff Laurent, Patti Harrison, Pat Logan, James Collier	S 4, D 12	35%	M.A., Ed.S. , Ph.D.	S 2, D 3
University of Alabama - Birmingham Room 201 EB Birmingham, AL 35294 www.uab.edu		Gary L. Sapp Ph: 205-975-8315 Fax: 205-975-8040 gsapp@uab.edu	Human Studies	UAB Graduate School, Rm 511 Hill University Center, 1400 University Blvd, Birmingham, AL, 35294-1150	Gary Sapp, Maxie Kohler	S 6	20%	Ed.S.	S 2
—ARIZONA—									
Arizona State University Div of Psychology in Education, College of Education Tempe, AZ 85287-0611 http://seamonkey.ed.asu.edu/~gail/programs/spy1.htm	D: NN, APA	Ray Kulhavy Ph: 602-965-3384 Fax: 602-965-0300 DPE@ASU.edu	Psychology in Education	Program and Graduate College Admissions, ASU, Tempe, AZ, 85287-1003	Ray Kulhavy, Andres Barona, Jerry Harris, Maura Roberts, Maryann Santos de Barona, Mary Stafford	D 42	45%	Ph.D.	D 3
Northern Arizona University Educational Psychology, CEE 5774, Northern Arizona University Flagstaff, AZ 86011 www.nau.edu/~cee/academics/EPS	D: NN	Ramona Mellott (Chair), Mary McLellan (Prog. Coor.) Ph: 520-523-6534 Fax: 520-523-1929 Ramona.Mellott@nau.edu	Educational Psychology Area	Program	Mary McLellan, Lena Gaddis, Kathy Bohan	S 25, D 21	70%	M.A., Ed.D	S 12, D 5
University of Arizona Department of Special Education, Rehabilitation, and School Psychology Tucson, AZ 87521-0069 www.ed.arizona.edu/html/serppsych.html	S: NN D: APA	Richard Morris Ph: 520-621-3086 Fax: 520-621-3821 morrisr@u.arizona.edu	Special Education, Rehabilitation, and School Psychology	Program	Richard Morris, John Obrzuit, Shitala Mishra, Jan Lord-Maes	S 14, D 32	75%	M.A, Ed.S., Ph.D	S 3, D 4
—ARKANSAS—									
University of Central Arkansas Department of Psychology and Counseling, Box 4915, UCA Conway, AR 72035 www.uca.edu	S: NN	John Murphy Ph: 501-450-3193 Fax: 501-450-5424 jmurphy@mail.uca.edu	Psychology and Counseling	Program	John Murphy, Ron Bramlett, Billy Smith, Joan Eichler	S 18, D 6	50%	M.S., Ph.D.	S 6
—CALIFORNIA—									
California State University - Chico Dept of Psychology (234), California State University Chico, CA 95929-0234 www.csuchico.edu/catalog/psy/	S: NN	Denise Worth, James Wolfe Ph: 530-898-5147 Fax: 530-898-4740 dworth@facultypo.csuchio.edu, jwolfe@csuchico.edu	Psychology	Graduate School, CSU - Chico, Chico, CA 95929-0875	Denise Worth, James Wolfe, Neil Schwartz	S 28	Standard univ. fin. aid opportunities	M.A.	S 7

California State University - Fresno 5310 Campus Drive, Department of Psychology, M/S PH11 Fresno, CA 93740-8019 www.csufresno.edu/gradstudies/gradfolder/psy	S: NN	Karen T. Carey Ph: 559-278-2478 Fax: 559-278-7910 karen_carey@csufresno.edu	Psychology	Program and CSU Fresno Graduate Admissions	Karen Carey, Marilyn Wilson, Beth Harn	S 21	41%	M.S.	S 11
California State University - Hayward Department of Educational Psychology, California State University Hayward, CA 94542 www.csuhayward.edu/ecat	S: NN	Mary diSibio Ph: 510-885-7430 Fax: 510-885-4798 mdisibio@csuhayward.edu	Educational Psychology	Program	Mary diSibio, Theodore Alper, Greg Jennings	S 55	50%	M.S.	S 19
California State University - Long Beach Dept of Ed. Psychology, Administration, & Counseling 1250 Bellflower Long Beach, CA 90840 www.csulb.edu/~edpsychg/academic.html#edpsych		Kristin Powers Ph: 562-985-9287 Fax: 562-985-4534 kpowers@csulb.edu	Educational Psychology, Administration and Counseling	Program	Kristin Powers, Thomas Kampwirth, Michael Bernard	S 60	30%	M.A., M.S.	S 7
California State University Los Angeles 5151 State University Drive Los Angeles, CA 90032-8140 http://web.calstatela.edu/dept/edac	S: NN	Margaret Garcia Ph: 323-343-4448 Fax: 323-343-4252 mgarcia2@calstatela.edu	Administration and Counseling	Program	Margaret Garcia, Pauline Mercado, G. Roy Mayer, George Hong, Michael Carter , Glenda Vittimberga	S 69	25%	M.S.	S 20
California State University - Northridge Department of Psychology, California State University Northridge, CA 91330 www.csun.edu		Jean Elbert Ph: 818-677-2827 Fax: 818-677-2829 eva.wahlroos@csun.edu	Psychology	Program	Jean Elbert, Joseph Morris, Marian Schiff	S 25	30%	M.A.	S 12
California State University Sacramento School of Education, California State University, 6000 J. Street Sacramento, CA 95819-6079 http://edweb.csus.edu/eds/schpsy.htm	S: NN	Catherine Christo Ph: 916-278-6649 Fax: 916-278-5904 christo@csus.edu	Special Education, Rehabilitation and SchoolPsychology	Program	Catherine Christo, Leslie Cooley, Stephen Brock	S 65	50%	M.S.	S 18
California State University - San Bernardino 5500 University Parkway San Bernardino, CA 92407 http://soe.csusb.edu/2b_speced.html		Dudley Wiest Ph: 909-880-5699 Fax: 909-880-7040 dwiest@csusb.edu	Educational Psychology and Counseling	Program	Dudley Wiest, Dwight Sweeney	S 15	5%	Pupil Personnel Services Credential	

School/Address/Web site	*Accred.*	*Director*	*Dept.*	*Application Info.*	*Prim. Faculty*	*EN*	*FA*	*DA*	*YG*
Chapman University One University Drive Orange, CA 92866 www.chapman.edu		Michael Hass Ph: 714-628-7217 Fax: 714-744-7035 mhass@chapman.edu	School of Education	Program	Michael Hass, John Brady	S 68	28%	Ed.S	S 12
Fresno Pacific University 1717 South Chestnut Fresno, CA 93702 http://www.fresno.edu/dept/grad/PPS.html		Dale E. Matson Ph: 559-453-2096 Fax: 559-453-2001 dematson@fresno.edu	Pupil Personnel Services		Dale E. Matson, Diane Talbot	S 45	5%	M.A.	S15
Humboldt State University Psychology Department, Humboldt State University Arcata, CA 95521 sorrel.humboldt.edu/~gradppsi	S: NN	Brent Duncan Ph: 707-826-5261 Fax: 707-826-4993 bbd1@humboldt.edu	Psychology	Program	Brent Duncan, Rich Langford, Susan Frances, Jan Paulus, William Reynolds	S 28	60%	M.A.	S 9
La Sierra University Educational Psychology and Counseling, 4700 Pierce St Riverside, CA 92515 www.lasierra.edu		Roger Handysides Ph: 909-785-2267 Fax: 909-785-2205 djewett@lasierra.edu	Educational Psychology and Counseling	Admissions Office, La Sierra University, 4700 Pierce St, Riverside, CA, 92515	Roger Handysides, Chang-Ho Li, Lennard Jorgensen	S 11	30%	Ed.S.	S 5
Loyola Marymount University School of Education, School Psychology Program, 7900 Loyola Blvd. Los Angeles, CA 90045 www.lmu.edu/acad/gd/edhuman		Scott W. Kester Ph: 310-338-2863 Fax: 310-338-1976 skester@lmumail.lmu.edu	Human Services	Program	Scott Kester, Brian Leung	S 35	90%	M.A	S 11
San Diego State University SDSU School Psychology Program, MC 1179 San Diego, CA 92182-1179 http://edweb.sdsu.edu/CSP/sp	S: NN	Valerie Cook-Morales Ph: 619-594-7730 Fax: 619-594-7025 schpsych@mail.sdsu.edu	Counseling and School Psychology	Program	Valerie Cook Morales, Carol Robinson-Zañartu,Colette Ingraham, Tam O'Shaughnessy	S 31	100%	M.S	S 10
San Francisco State University Psychology Department, 1600 Holloway Ave. San Francisco, CA 94132 www.sfsu.edu/~psych/psybul.htm	S: NN	Diane Harris Ph: 415-338-2711 Fax: 415-338-2398	Psychology	Program	Diane Harris, Eric Gallencamp, Frank Treadway, Mary McGrath, Deborah Estell, Amira Mostaya	S 16	Contact Office of Student Financial Aid 415-338-6000	M.S., P.P.S. Credential	S 5
University of California - Berkeley School of Education, University of California Berkeley, CA 94720-1670 www-gse.berkeley.edu/program/SP/	D: APA	Nadine M. Lambert Ph: 510-542-7581 Fax: 510-642-3555 nlambert@socrates.berkeley.edu	Cognition and Development	Admissions Office, Graduate School of Education, University of California, Berkeley, CA 94720-1670	Nadine Lambert, Carolyn Hartsdugh, Kamenji Singh,Gary Yarbroue, Kate Perry, Lin Cerles	D 34	60%	Ph.D.	D 5

University of California - Davis Division of Education, One Shields Avenue Davis, CA 95616-8579 http://education.ucdavis.edu/		Jonathan Sandoval Ph: 530-752-3198 Fax: 530-752-5411 jhsandoval@ucdavis.edu	Education	Contact Karen Bray, 530-752-0761	Jonathan Sandoval, Patricia Gandara	D 7	50%	Ph.D	D 2
University of California - Riverside School of Education, University of California Riverside, CA 95616 www.education.ucr.edu/GradEd/PhDSPsyOvr	-	Frank M. Gresham Ph: 909-787-4516 Fax: 909-787-3942 edfmg@ucrac1.ucr,edu	School of Education	Program	Frank M. Gresham, Lee Swonson, Don MacMillan	D 10	100%	Ph.D.	D 3
University of California - Santa Barbara UCSB, Gevirtz Graduate School of Education Santa Barbara, CA 93106 http://education.ucsb.edu/~ccspweb/	S: NN D: APA	Gale Morrison, Mike Furlong Ph: 805-893-3375 or 805-893-3338 Fax: 805-893-7264 gale@education.ucsb.edu or mfurlong@education.ucsb.edu	Education	Program	Gale Morrison, Michael Furlong,Shane Jimerson	S 17, D 15	100%	M.Ed, Ph.D	S 7, D 3
University of the Pacific Benerd School of Education, 3601 Pacific Ave Stockton, CA 95211 www.uop.edu/education/cpsych		Linda Webster Ph: 209-946-2559 Fax: 209-946-3110 lwebster@uop.edu	Educational and Counseling Psychology	Program	Linda Webster, Lydia Flasher, Judith Van Hoorn, Rachelle Kisst-Hackett	S 10, D 7	50%	M.A., P.P.S. Credential, Ed.D	S 5, D 5
— Colorado —									
University of Colorado - Denver School of Education Campus Box 106, PO Box 173364 Denver, CO 80217-3364 www.soe.cudenver.edu	S: NN	Robyn Hess Ph: 303-556-6784 Fax: 303-556-4479 robyn_hess@ceo.cudenver.edu	Professional Learning and Advancement Networks	Program	Robyn Hess, Steven Zucker	S 90	25%	Ed.S.	S 16
University of Denver 2450 S. Vine St., College of Education Denver, CO 80208 www.du.edu/education/		Gloria Miller Ph: 303-871-3340 Fax: 303-871-4456 glmiller@du.edu	Educational Psychology	Program	Gloria Miller, Mark Lyon, Martin Tombari	S 8, D 24	80%	Ed.S, Ph.D	S 2, D 4
University of Northern Colorado Programs in School Psychology, McKee 248, Box 131 Greeley, CO 80639 www.edtech.univnorthco.edu/coe/PPSY/schpsy.html	S: NN D: NN, APA	Rik Carl D'Amato Ph: 970-351-2731 Fax: 970-351-2625 talexand@edtech.unco.edu	Professional Psychology Division	Admissions Secretary, Program in School Psychology, Division of Professional Psychology, University of Northern Colorado, Greeley, CO 80639	Rik Carl D'Amato, Achilles Bardos, Ellis Copeland, Michelle Schicke, Franci Crepeau-Hobson, David Gonzalez	S 43, D 30	30%	Ed.S, Ph.D	S 20, D 5

School/Address/Web site	*Accred.*	*Director*	*Dept.*	*Application Info.*	*Prim. Faculty*	*EN*	*FA*	*DA*	*YG*
—CONNECTICUT—									
Fairfield University Graduate School of Education and Allied Professions Fairfield , CT 065430-7524 www.fairfield.edu/academic/ gradedu/gseap index		Paula Gill Lopez Ph: 203-254-4000 x2632 Fax: 203-254-4047 plopez@fair1.fairfield.edu	Psychology Graduate	Program	Paula Gill Lopez, Faith-Ann Dohm	S 50	80%	M.A, C.A.S.	S 12
Southern Connecticut State University Counseling and School Psychology, DA 126, 501 Crescent Street New Haven, CT 06515 scwww.ctstateu.edu	S: NN	Joy Fopiano Ph: 203-392-5910 Fax: 203-392-5917 fopiano@scsu.ctstateu.edu	Counseling and School Psychology	Program	Joy Fopiano, Michael Martin	S 79	7%	M.S., Sixth Year Professional Diploma	S 10
University of Connecticut Department of Educational Psychology, 249 Glenbrook Road, U-64 Storrs, CT 06269 www.ucc.uconn.edu/~wwwepu	S: NN D: NN	Thomas J. Kehle Ph: 860-486-0166 Fax: 860-486-0210 kehle@uconnvm.uconn.edu	Educational Psychology	Program	Thomas Kehle, Melissa A. Bray, Sandra Chafouleas	S 4, D 27	90%	M.A, Ed.S., Ph.D.	S 4, D 3
University of Hartford Dept of Psychology, University of Hartford, 200 Bloomfield Avenue West Hartford, CT 06117 www.hartford.edu/graduate/as	S: NN	Tony D. Crespi Ph: 860-768-4544 Fax: 860-768-5292 crespi@uhavax.hartford.edu	Psychology	Program	Tony Crespi, John Schloss, Len Millins, Mary Steir	S 35	25%	M.S., Specialist Distinction	S 9
—WASHINGTON, DC—									
Gallaudet University Psychology Department, Gallaudet University, 800 Florida Avenue NE Washington, DC 20002 www.gallaudet.edu/	S: NN	Lynne Blennerhassett Ph: 202-651-5540 Fax: 202-651-5747 lynne.blennerhassett@ gallaudet.edu	Psychology	Program	Tammy Weiner, Lynne Blennerhassett, Tania Thomas-Presswood, Bryan Miller	S 22	90%	M.A., Psy.S.	S 8
Howard University Dept of Human Dev. & Psychoeducational Studies, Urban School Psychology, 2400 6th St NW Washington, DC 20059 www.howard.edu		LaMonte G. Wyche, Sr. Ph: 202-806-7350 Fax: 202-806-7018 lwyche@howard.edu	Human Development and Psychoeducational Studies, Urban School Psychology	Program	LaMonte G. Wyche, Sr.	S 2, D 17	50%	M.Ed, M.A., C.A.G.S., Ed.D, Ph.D	S 2, D 3
—DELAWARE—									
University of Delaware School of Education, College of Human Resources Newark, DE 19716 www.udel.edu	S: NN	Kathleen Minke Ph: 302-831-1648 Fax: 302-831-4445 minke@udel.edu	School of Education	Program	Kathleen Minke, George Bear, Joseph Glutting	S 13, D 2	100%	M.A., Ph.D	S 6

—Florida—

Barry University Department of Psychology, 11300 N.E. 2nd Avenue Miami Shores, FL 33161 www.barry.edu	S: NN Conditional	Agnes E. Shine Ph: 305-899-3991 Fax: 305-899-3279 ashine@mail.barry.edu	Psychology	Div. of Enrollment Services. Graduate Admissions	Agnes E. Shine, Christopher Starratt, Linda M. Peterson, Marie-France Desrosiers, Kayreen Burns, Lenore Szuchman	S 14	30%	M.S., S.S.P.	S 6
Florida A & M University College of Arts & Sciences, GECC, Room 305 Dept of Psychology Tallahassee, FL 32307 http://www.famu.edu/cas/psychology.html		Seward Hamilton Ph: 850-599-3014 Fax: 850-561-2540	Psychology	Office of Admissions, Florida A & M University, Tallahassee, FL 32307-0077	Seward Hamilton, Yvonne Bell, Joseph Baldwin, Raeford Brown, John Chambers, H. Jackson-Lowman, Oladipo Aroyewun, Clarice Hall	S 21	30%	M.S.	S 3
Florida International University School Psychology Training Program, University Park,EB 238-A Miami, FL 33199 www.fiu.edu/~edpsy/sch_psychhome.htm		Philip J. Lazarus Ph: 305-348-2725 Fax: 305-348-4125 philaz1@aol.com	Educational Psychology and Special Education	Program and Graduate Admissions, Florida International University, University Park Campus, Miami, Fl 33199	Philip Lazarus, Pat Del Valle, Jeff Toomer, Adriana Garcia McEachern, Maureen Kenny, Martha Palaez-Nogueras, Marisol Gavilan	S 40	20%	Ed.S	S 12
Florida State University Psychological Services in Education, HSS/COE, 215 Stone Bldg. Tallahassee, FL 32306 www.coe.fsu.edu/departments/hss/schoolpsy.html	D: APA	Frances Prevatt Ph: 850-644-2854 Fax: 850-644-4335 fprevatt@coe.fsu.edu	Human Services and Studies	Program	Frances Prevatt, Briley Proctor	S 22, D 38	75%	Ed.S, Ph.D	S 10, D 5
University of Central Florida College of Education Orlando, FL 32816 http://www.ucfed.ucf.edu.schpsy	S: NN	Carl Balado Ph: 407-823-2054 Fax: 407-823-3859 cbalado@mail.ucf.edu	Child, Family, and Community Sciences	Program	Carl R. Balado, Gordon Taub	S 48	25%	Ed.S.	S 16
University of Florida School Psychology Program, 1403 Norman Hall Gainesville, FL 32611-2053 http://nersp.nerdc.ufl.edu/~founded/handbk2.htm	S: NN D: NN, APA	John H Kranzler Ph: 352-392-0723 Fax: 352-392-5929	Educational Psychology	Program	John Kranzler, Thomas Oakland, Tina Smith, Nancy Waldron, Jennifer Asmus	S 40, D 20	95%	M.Ed, Ph.D	S 10, D 4
University of South Florida Dept of Psychological Foundations, FAO 100 U, Room 270 Tampa, FL 33620 www.coedu.usf.edu/deptpsysoc/psych	S: NN D: NN, APA	George M. Batsche Ph: 813-974-3246 Fax: 813-974-5814 batsche@tempest.coedu.usf.edu	Psychological Foundations	Program	George Batsche, Howard Knoff, Kathy Bradley-Klug, Kelly Powell-Smith, Linda Raffaele, Michael Curtis	S 22, D 46	100%	M.A., Ed.S., Ph.D.	S 10, D 4

—Georgia—

Georgia Southern University P.O. Box 8131 Statesboro, GA 30460-8131 www2.gasou.edu/coe/medpsych.htm www2.gasou.edu/coe/edspsych.htm		Robert Martin Ph: 912-681-5051 Fax: 912-486-7104 bobmart@gasou.edu	Leadership Technology and Human Development	College of Graduate Studies, P.O. Box 8113, Georgia Southern U, Statesboro, GA 30460	Robert Martin, Patricia McAfee	S 37	70%	M.Ed., Ed. S.	S 11

School/Address/Web site	Accred.	Director	Dept.	Application Info.	Prim. Faculty	EN	FA	DA	YG
Georgia State University Department of Counseling and Psychological Services Atlanta , GA 30303-3089 www.gsu.edu/~wwwaae/eds/SPS	D: NN, APA	Gary Evans Ph: 404-651-4856 Fax: 404-651-1160 cpsjge@langate.gsu.edu	Counseling and Psychological Services	Office of Academic Assistance, College of Education, Georgia State University 300 Education Building, University Plaza, Atlanta, GA 30303-3089	Gary Evans, Rich Gilman, Kris Varjas, Joel Meyers, Robin Gordon	S 24, D 20	30%	M.Ed., Ed.S., Ph.D.	S 22, D 2
University of Georgia 329 Aderhold Hall, Dept of Educational Psychology Athens, GA 30602 www.coe.uga.edu/edpsych/schoolpsych/index.html	D: NN, APA	Randy W. Kamphaus Ph: 706-542-0014 Fax: 706-542-4240 rkamp@arches.uga.edu	Educational Psychology	Program	Randy Kamphaus, Roy P. Martin, Michele Lease, Leslie Munson	D 43	88%	Ph.D.	D 6
Valdosta State University Department of Psychology and Counseling Valdosta, GA 31698-0100 www.valdosta.edu/~lhilgert/spsyc	S: NN Conditional	Larry Hilgert Ph: 912-333-5930 Fax: 912-259-5576 lhilgert@valdosta.edu	Psychology and Counseling	Valdosta State University, Graduate Studies, Valdosta, GA 31698-0005	Larry Hilgert, Kerry Hinkle, Daniel Kaeck, David Wasielski	S 23	50%	Ed.S.	S 5
—IDAHO—									
Idaho State University Box 8059, Idaho State University Pocatello, ID 83209 www.isu.edu/departments/educ/special/psycho	S: NN	Gerald Nunn Ph: 208-236-3499 Fax: 208-236-4224 spadgera@isu.edu	Counselor Education and Special Education	Program	Gerald Spadafore, Gerald Nunn	S 12	90%	M.Ed., Ed.S	S 6
University of Idaho School Psychology Program, College of Education, PO Box 443083, University of Idaho Moscow, ID 83844-3083 www.uidaho.edu/ed/divisions.html	S: NN	Thomas N. Fairchild Ph: 208-885-6838 Fax: 208-885-6869 thomasf@uidaho.edu	Division of Adult, Counselor and Technology Education	Program	Tom Fairchild, Tom Trotter, Nicole Konen	S 51		Ed.S.	S 10
—ILLINOIS—									
Eastern Illinois University Psychology Department, Eastern Illinois University Charleston, IL 61920 www.eiu.edu/~psych/schoolpsych.htm	S: NN	Mike Havey Ph: 217-581-3523 Fax: 217-581-6764 cfjmh@eiu.edu	Psychology	Program	Mike Havey, Gary Canivez, Assege Hailemariam, Gary Cates	S 27	100%	S.S.P.	S 10
Governors State University Department of Psychology and Counseling, Governors State University University Park, IL 60466-0975 www.govst.edu/users/glysbuyer/PandS.html	S: NN	Leisa A. Williams Ph: 708-534-4840 Fax: 708-534-8451 l-williams2@govst.edu, lawphd@prodigy.net	Psychology and Counseling	Program	Leisa Williams, Trista Huckleberry, Gabriele van Lingen	S 120	4%	M.A.	S 24
Illinois State University Department of Psychology, Campus Box 4620 Normal, IL 61790-4620 www.cas.ilstu.edu/psychology	S: NN D: NN, APA	Mark E. Swerdlik Ph: 309-438-8701 Fax: 309-438-5789 meswerd@ilstu.edu	Psychology	Program	Mark Swerdlik, Karla Doepke, Kathryn Hoff, Steven Landau, Adena Meyers	S 18, D 37	100%	S.S.P., Ph.D.	S 6, D 6

Loyola University of Chicago 820 North Michigan Ave Chicago, IL 60611 www.luc.edu/schools/education	S: NN	Ronald R. Morgan Ph: 847-853-3332 Fax: 847-853-3375 rmorgan@luc.edu	CIEP	Program	Ronald Morgan, Pamela Fenning, David Prasse, Joy Rogers, Nancy Scott, Martha Wynne, Jack Kavanagh	S 38, D 32	25%	M.Ed., Ph.D.	S 15, D 5
National-Louis University Educational Psychology Department, 2840 Sheridan Road Evanston, IL 60201-1796 www.nl.edu	S: NN	Diane Salmon Ph: 800-443-5522 x 2724 Fax: 847-256-1057 aday@evan1.nl.edu	Educational Psychology	National College of Education, Graduate Admissions Office, National-Louis University	Diane Salmon, Marjorie Roth Leon, Rita Weinberg, Robert Clark, Barbara Leys, Philip Garber, Shani Beth-Halachmy	S 54, D 14	12%	M.Ed., M.S.Ed, Ed.S., Ed D.	S 15, D 1
Northern Illinois University Department of Psychology, Northern Illinois University DeKalb, IL 60115-2892 www.niu.edu/	S: NN	Gregory Waas Ph: 815-753-3508 Fax: 815-753-8088 gwaas@niu.edu	Psychology	Program	Gregory Waas, Elise Masur, Michelle Demuray, Christine Malecki	S 15, D 8	95%	M.A., Ph.D.	S 6, D 1
Southern Illinois University - Edwardsville Psychology Department, Box 1121, Southern Illionois University Edwardsville, IL 62026 www.siue.edu/PSYCHOLOGY/htm	S: NN	Emily J. Krohn Ph: 618-650-3646 Fax: 618-650-5087 ekrohn@siue.edu	Psychology	Program	Emily Krohn, Andrea Rotzan, Robert Lamp, Jeremy Jewell, Bryce Sullivan, Anthony Traxler	S 17	100%	M.S., S.S.P.	S 10
Western Illinois University Department of Psychology Waggoner Hall, 1 University Circle Macomb, IL 61455 www.wiu.edu/users/mipsy/	S: NN	Paula S. Wise Ph: 309-298-2652 Fax: 309-298-2179 Paula_Wise@ccmail.wiu.edu	Psychology	Department of Psychology, Western Illinois University, Macomb, IL 61455	Paula Wise, Ruth Kelly, Tracy Cruise	S 23	28%	S.S.P.	S 7
—Iowa—									
Iowa State University No program Ames, IA 50011-3180 http://psych-server.iastate.edu/grad/homepage.htm		Daniel J. Reschly Ph: 515-294-1742 Fax: 515-294-6424 dreschly@iastate.edu	Psychology	Program	Daniel J. Reschly, Carla Peterson, William Panak, Camilla Benbow	S 11, D 8	100%	S.S.P., Ph.D.	S 3, D 1
University of Iowa 362 Lindquist Center Iowa City, IA 52242 www.uiowa.edu/~coe2/divisions/pandq/schoolpsych/	D: NN, APA	Kathryn Gerken Ph: 319-335-5333 Fax: 319-335-6145 kathryn-gerken@uiowa.edu	Psychological and Quantitative Foundations	Program	Kathryn Gerken; Stewart Ehly, Kenneth Merrell, Christine Novak	D 36	95%	Ph.D.	D 5
University of Northern Iowa 617 Schindler Education Center, University of Northern Iowa Cedar Falls, IA 50614-0607 http://www.uni.edu/pubrel/catalog/ma-special-dr.htm	S: NN	Annette M. Carmer Ph: 319-273-2694 Fax: 319-273-6997 barry.wilson@uni.edu	Educational Psychology and Foundations	Program	Annette M. Carmer, Don Schmits, Ralph Scott	S 13	72%	Ed.S.	S 6

School/Address/Web site	*Accred.*	*Director*	*Dept.*	*Application Info.*	*Prim. Faculty*	*EN*	*FA*	*DA*	*YG*
—INDIANA—									
Ball State University Educational Psychology, Teachers College 524, Ball State University Muncie, IN 47306 www.bsu.edu/teachers/departments/edpsy	S: NN D: NN, APA	Ray Dean/Josh Hall Ph: 765-285-8500 Fax: 765-285-5988/285-3653 rdean@bsu.edu or jhall2@bsu.edu	Educational Psychology	Program	R. S. Dean, J. Hall, B.E.Gridley, B. A. Rothlisberg, D. McIntosh	S 17, D 32	90%	M.A., Ed.S., Ph.D.	S 4, D 7
Indiana State University School of Education, Room 606 Terre Haute, IN 47809 http://web.indstate.edu:80/	S: NN D: NN, APA	Lisa Bischoff Ph: 812-237-3588 Fax: 812-237-7613 epbisch@befac.indstate.edu	Educational and School Psychology	Program	Lisa Bischoff, Edward Kirby, Chris MacDonald, P.G. Aaron, Michael Bahr	S 17, D 33	64%	M.Ed., Ed.S., Ph.D	S 6, D 5
Indiana University 201 N. Rose Avenue, W.W. Wright School of Education Bloomington, IN 47405-1006 http//education.indiana.edu/cep/sphmpg.html	S: NN D: NN, APA	Thomas J. Huberty Ph: 812-856-8332 Fax: 802-856-8333 or 812-856-8440 huberty@indiana.edu	Counseling and Educational Psychology	Program	Thomas Huberty, Jack Cummings, Russell Skiba, Karen Gavin	S 10, D 38	90–95%	Ed.S., Ph.D.	S 4, D 3
Valparaiso University Department of Education, Valparaiso University, 221 Miller Hall Valparaiso, IN 46383 http://www.valpo.edu/psych/Grad.htm		Maryann Dudzinski Ph: 219-464-5473 Fax: 219-464-6878 maryann.dudzinski@valpo.edu	Education	Division of Graduate Studies, 115 Kretzmann Hall, Valparaiso University, Valparaiso, IN 46383	Maryann Dudzinski, Christina Grabarek, Doris Cole, Ed Hackett, Joyce Burgener	S 19	0%	Ed.S.	S 4
—KANSAS—									
Emporia State University Box 4031, Emporia State University Emporia, KS 66801 www.emporia.edu/psyspe/school.htm	S: NN Conditional	Sharon Karr Ph: 316-341-5819 Fax: 316-341-5801 karrshar@emporia.edu	Psychology and Special Education	Emporia State University, Office of Graduate Studies and Research Box 4003, Emporia, KS, 66801-5087	Sharon Karr, Jim Persinger, Cooper Holmes, Paul McKnab, Frank Mullins	S 24	42%	M.S., Ed.S	S 7
Fort Hays State University Department of Psychology, Fort Hays State University 600 Park St. Hays, KS 67601-4099 www.fhsu.edu/psych/index		Steven F. Duvall Ph: 785-628-4405 Fax: 785-628-5861 rmarkley@fhsu.edu	Psychology	Program	Steven Duvall	S 8	95%	M.S., Ed.S.	S 4
Pittsburg State University Department of Psychology and Counseling Pittsburg, KS 66762-7551 www.pittstate.edu/psych/		Rick Lindskog Ph: 316-235-4522 Fax: 316-235-4520 clindsko@pittstate.edu	Psychology and Counseling	Program	Rick Lindskog	S 27	49%	M.S., Ed.S	S 7
University of Kansas Department of Psychology and Reserch in Education, 621 Pearson Hall, 1122 West Campus Road Lawrence, KS 66045 www.soe.ukans.edu/programs/schoolpsyc.html	S: NN D: NN, APA	Steven W. Lee Ph: 785-864-3931 Fax: 913-864-3820 swlee@ku.edu	Psychology and Research in Education	Program	Steven Lee, Marvin Fine, Robert Harrington, Shane Lopez, Richard Simpson	S 21, D 22	100%	Ed.S, Ph.D	S 8, D 2

Wichita State University Campus Box 123, 1845 Fairmount Wichita , KS 67260 www.twsu.edu/~coewww	S: NN	Nancy McKellar Ph: 316-978-3326 Fax: 316-978-3102 mckellar@wsuhub.uc.twsu.edu	Administration, Counseling, Educational and School Psychology	Program	Nancy McKellar, Marci Girton	S 40	50%	M.Ed., Ed. S.	S 6
—KENTUCKY—									
Eastern Kentucky University Department of Psychology, 127 Cammack, Richmond KY 40475-0937 www.eku.edu./psy	S: NN	Jim Batts Ph: 606-622-1105 Fax: 606-622-5871 jim.batts@eku.edu	Psychology	Program	Jim Batts, Dan Florell, Myra Bundy	S 27	70%	Psy.S.	S 10
Murray State University Department of Educational Studies, Leadership and Counseling, P.O. Box 9 Murray, KY 42071-3818 http://campus.murraystate.edu/academic/faculty/marty.dunham/home.html		Mardis Dunham Ph: 270-762-2791 Fax: 270-762-3799 marty.dunham@coe.murraystate.edu	Educational Studies, Leadership and Counseling	Program	Mardis Dunham, Gabriele van Linger, Thomas Holcomb, Thomas Wagner		20%	Certification only	
University of Kentucky School Psychology Clinic, 641 Maxwelton Court Lexington, KY 40506-0349 www.uky.edu/education/edphead.html	S: NN D: NN, APA	Stephen T. DeMers Ph: 859-257-1381 Fax: 859-257-1191 sdemers@pop.uky.edu	Educational and Counseling Psychology	School Psychology Program, Educational and Counseling Psychology, Director of Graduate Studies, 245 Dickey Hall, Lexington, KY, 40506-0017	Stephen DeMers, Harriet Ford, H.Thompson Prout	S 22, D 25	60%	M.S.Ed, Ed.S, Ph.D	S 9, D 2
Western Kentucky University Department of Psychology, WKU, 1 Big Red Way Bowling Green, KY 42101 http://edtech.tph.wku.edu/~psych/areas/school	S: NN	Carl Myers Ph: 270-745-2695 Fax: 270-745-6934 carl.myers@wku.edu	Psychology.	Program	Carl Myers, William Pfohl, Elizabeth Jones	S 28	100%	Ed.S.	S 7
—LOUISIANA—									
Louisiana State University Department of Psychology, 236, Audubon Hall Baton Rouge, LA 70803-5501 http://bitwww1.psc.lsu.edu	D: APA	Joseph C. Witt Ph: 504-388-4111 Fax: 504-388-4125 pswitt@lsu.edu	Psychology	Program	Joseph Witt, George Noell, Dorthea Lerman, John Northup	D 12	100%	Ph.D	D 4
Louisiana State University - Shreveport Psychology Department, One University Place Shreveport, LA 71115 www.lsus.edu	S: NN	Merikay M. Ringer Ph: 318-797-5046 Fax: 318-798-4171 mringer@pilot.lsus.edu	Psychology	Program	Merikay Ringer, P. Stanley, R. Nolan	S 30		Psy.S	S 5
McNeese State University Department of Psychology, McNeese State University Lake Charles, LA 70609 http://www.mcneese.edu/colleges/education/index.htm		Jerry Whiteman Ph: 318-475-5457 Fax: 318-475-5467	Psychology	McNeese State University, Registrar,Lake Charles, LA 70609	Jerry Whiteman, L.S. Dilks, Lynette Fisher	S 10	10%	M.A.	S 4

School/Address/Web site	*Accred.*	*Director*	*Dept.*	*Application Info.*	*Prim. Faculty*	*EN*	*FA*	*DA*	*YG*
Nicholls State University **Department of Psychology and Counselor Education, PO Box 2075** **Thibodaux, LA 70310** **www.nicholls.edu**	S: NN Conditional	**J. Steven Welsh** **Ph: 504-448-4370** **Fax: 504-448-4926** **psyc-sjw@nich-nsunet.nich.edu**	Psychology and Counselor Education	Program	**J. Steven Welsh, Carmen Dupree Broussard, Larry Stout**	S 34	60%	S.S.P.	S 6
Tulane University **School Psychology Program, Dept of Psychology, 2007 Stern Science Center** **New Orleans, LA 70118** **www.tulane.edu/~psych/psychome.html**	D: APA	C. Chrisman Wilson **Ph: 504-865-5331** **Fax: 504-862-8744** c.wilson@tulane.edu	Psychology	Program	**C. Chrisman Wilson, Michael Cunningham, Barbara Moely, Margaret Dempsey, Jeffrey Lockman, Melanie McGrath, Stacy Overstreet**	D 15	100%	Ph.D.	D 2
University of Louisiana at Monroe Department of Psychology Monroe, LA 71209-0260 www.ulm.edu/~chutto/gradpsy.html	S: NN	Veronica Evans Lewis Ph: 318-342-1330 Fax: 318-342-1240 pslewis@ulm.edu	Psychology	Program	Veronica Lewis, Patty Wilhite, David Williamson, Jean Cottingham	S 22	65%	M.S., S.S.P	S 8
—Maine—									
University of Southern Maine 400 Bailey Hall, University of Southern Maine Gorham, ME 04038 http://www.usm.maine.edu/~coe/program/sp2.htm	S: NN	Mark W. Steege Ph: 207-780-5309 Fax: 207-780-5043 msteege@usm.maine.edu	Human Resources	University of Southern Maine, Advising & Admission Office, 118 Bailey Hall Gorham, ME 04038	Mark Steege, Rachel Brown-Chidsey	S 40	33%	M.S.	S 8
—Maryland—									
Towson State University Psychology Department, Towson University, 8000 York Rd. Towson, MD 21252 www.towson.edu	S: NN Conditional	Susan Bartels Ph: 401-704-3070 Fax: 410-704-3800 sbartels@towson.edu	Psychology	Graduate School, Towson University, Towson, MD 21252	Susan Bartels, Stanley Zweback, Brlice Mortenson	S 45	20%	M.A., C.A.S	S 10
University of Maryland 3214 Benjamin Bldg, Dept of Counseling & Personnel Services College Park, MD 20742-1125 www.education.umd.edu/spsy	S: NN D: NN, APA	William Strein Ph: 301-405-2858 Fax: 301-405-9995 ws30@umail.umd.edu	Counseling and Personnel Services	Program	William Strein, Hedwig Teglasi, Sylvia Rosenfield	S 5, D 34	100%	M.A., C.A.G.S., Ph.D.	S 1, D 3
—Massachusetts—									
American International College 1000 State St, Box 16L Springfield, MA 01109-3189 www.aic.edu/		Antoinette Spinelli-Nannen Ph: 413-205-6302 Fax: 416-205-3598	Graduate Psychology	Program	Antoinette Spinelli-Nannen, Richard Sprinthall, John DeFrancesco,Paul Quinlan, Lorna Murphy	S 60		M.A, C.A.G.S	S 6
Northeastern University Dept of Counseling and Applied Educational Psychology, 203 Lake Hall Boston, MA 02115 www.bouve.neu.edu/department/crs/caepdegrees.html or www.dac.neu.edu/cp/sp	S: NN, D: APA	Louis Kruger (CAGS); Karin Lifter (Ph.D.) Ph: 617-373-3276 Fax: 617-373-8892 counsel@neu.edu	Department of Counseling and Applied Educational Psychology	Graduate School, Bouve College Health Sciences, 203 Mugar, Boston, MA 02115	Louis Kruger, William Sanchez, Chieh Li, Karen Lifter, Emanuel Mason, Debbie Greenwald, Barbara Okun, Carmen Armengold, Ena Vazuez-Nuttall	S 44, D 12	66%	M.S., C.A.G.S., Ph.D.	S 20, D 2

Tufts University Department of Education, Tufts University Medford, MA 02155 ase.tufts.edu/education	S: NN	Caroline Wandle Ph: 617-627-2393 Fax: 617-627-3901 caroline.wandle@tufts.edu	Education	Program	Caroline Wandle, Steven Luz-Alterman, Amy Pobst, Terry Davis	S 45	80%	M.A., C.A.G.S	S 15
University of Massachusetts - Amherst School of Education, University of Massachusetts Amherst, MA 01003-4150 http://www.umass.edu	S: NN Conditional D: NN, APA (inactive)	Gary Stoner Ph: 413-545-3610 Fax: 413-545-1523 gstoner@educ.umass.edu	Student Development and Pupil Personnel Services	Program	Gary Stoner, Bill Matthews, Brunilda DeLeon, John hintze	S 15, D 15	90%	M.Ed., C.A.G.S., Ph.D	S 4, D 3
University of Massachusetts - Boston Graduate College of Education, Wheatley Hall, 100 Morrissey Blvd Boston, MA 02125-3393 http://mirror.www.umb.edu/EXPLORE_ACADEMIC_PROG/graduate_programs/	S: NN	Varda Konstam Ph: 617-287-7619 Fax: 617-287-7664 konstam@umbsky.cc.umb.edu	Counseling and School Psychology	Program	Varda Konstam, Peter Entwistle, Virginia Harvey, Joan Struzziero, Carol Leavell, Mary Ann Ham	S 55	10%	M.Ed., C.A.G.S.	S 33
—Michigan—									
Andrews University Educational and Counseling Psychology Berrien Springs, MI 49104 www.educ.andrews.edu		Sheryl A. Gregory Ph: 616-471-3473 Fax: 616-471-6374 ecp@andrews.edu	Educational and Counseling Psychology	Program	Sheryl A. Gregory, Elsie Jackson, Lenore Brantley		25%	Ed.S., Ph.D., Ed.D.	S 4, D 1
Central Michigan University 139 Sloan Hall, Department of Psychology Mt Pleasant, MI 48859 www.cmich.edu	S: NN D: NN	Sharon Bradley-Johnson Ph: 989-774-6464 Fax: 989-774-2553 sharon.bradley.johnson@cmich.edu	Psychology	School Psychology Program, 101 Sloan, Psychology Dept., Mt Pleasant, MI 48859	Sharon Bradley-Johnson, Tim Hartshorne, Susan Jacob, Sandra Morgan, Katrina Rhymer	S 26, D 7	60%	S.S.P., Ph.D	S 6, D 2
Michigan State University 455 Erickson Hall, CEPSE East Lansing, MI 48824 http://ed-web3.educ.msu.edu/schpsych/	D: NN, APA	Evelyn R. Oka/Jean A. Baker Ph: 517-432-0843 Fax: 517-353-6393 evoka@msu.edu, jbaker@msu.edu	Counseling, Educational Psychology and Special Education (CEPSE)	Program	Jean A. Baker, Evelyn R. Oka, John S. Carlson	S 14 D 27	65%	Ed.S, Ph.D	S 5, D 3
University of Detroit - Mercy College of Liberal Arts, 8200 Outer Dr., PO Box 19900 Detroit, MI 48219-0900 http://www.udmercy.edu		Mary Elizabeth Hannah Ph: 313-993-6167 Fax: 313-993-6397 HannahME@UDMercy.edu	Psychology	Program	Mary Elizabeth Hannah, Judy McCown, Douglas MacDonald	S 40	45%	S.S.P	S 8
Wayne State University College of Special Education, Room 331, Wayne State University Detroit , MI 48202 http://WWW.COE.Wayne.Edu/org/TBF/grad/grad.html		Guy T. Doyal Ph: 313-577-1614 Fax: 313-577-5235	Educational Psychology	Program	Guy Doyal, Stephen Hillman, Cheryl Somers, Jina Yoon	S 36, D 60		M.A., Ph.D.	S 18, D 7

School/Address/Web site	*Accred.*	*Director*	*Dept.*	*Application Info.*	*Prim. Faculty*	*EN*	*FA*	*DA*	*YG*
Western Michigan University **Department of Psychology, Western Michigan University, 1903 W. Michigan Ave.** **Kalamazoo, MI 49008-5439** **unix.cc.wmich.edu/~dalye/schoolpsychology/schoolpsych.htm**	S: NN	**Edward Daly** **Ph: 616-387-4469** **Fax: 616-387-4550** **edward.daly@wmich.edu**	Psychology	Program	Edward Daly, Kristal Ehrhardt, Ruth Ervin	S 16, D 10	41%	Ed.S., Ph.D.	S 9
—MINNESOTA—									
Moorhead State University School Psychology Program, 1104 7th Ave. So. Moorhead, MN 056563 www.mnstate.edu/gradpsyc	S: NN	Margaret L. Potter Ph: 218-236-2802 Fax: 218-236-2168 po[illegible]er@mnstate.edu	Psychology	Program	Margaret Potter, Olivia Melroe, Lisa H. Stewart	S 18	100%	M.S., Ed.S.	S 7
University of Minnesota School Psychology Program, 350 Elliott Hall, 75 East River Road Minneapolis, MN 055455 http://www.coled.umn.edu/EdPsy/SchPsy/default.html	S: NN D: NN, APA	Scott McConnell Ph: 612-624-4156 Fax: 612-624-0879 lavoi003@tc.umn.edu	Educational Psychology	Program	Sandra Christenson, James Ysseldyke, Scott McConnell, Marika Ginsburg-Block, Daria Courtney, Matthew Lau	S 14 D 42	100%	Ed.S., Ph.D.	S 9, D 6
—MISSISSIPPI—									
Mississippi State University Allen Hall, Rm 508, Mississippi State University Miss. State, MS 39762 http://www.msstate.edu/dept/COE/CEdEPy/cedepy.html	S: NN D: NN, APA	T. Steuart Watson Ph: 662-325-3426 Fax: 662-325-3263 tsw2@ra.msstate.edu	Counselor Education and Educational Psychology	The Graduate School, P.O Box G, Mississippi State, MS 39762	T.S Watson, C. Hennington, Tony Doggett	D 21	100%	Ed.S, Ph.D	S 1, D 5
University of Southern Mississippi Department of Psychology, Box 5025 Hattiesburg, MS 39406-5025 www.dept.usm.edu/~psy/school/home.htm	D: NN, APA	Daniel H. Tingstrom Ph: 601-266-4177 Fax: 601-266-5580 daniel.tingstrom@usm.edu	Psychology	Program	Daniel Tingstrom, Ron Edwards, D.Joe Olmi, Heather Sterling-Turner	D 24	95%	M.A., Ph.D	D 6
—MISSOURI—									
University of Missouri - Columbia 16 Hill Hall, University of Missouri-Columbia Columbia, MO 65211 www.tiger.coe.missouri.edu/~schpsy	D: APA	Rick Jay Short Ph: 573-882-7731 Fax: 573-884-5989 rshort@tiger.coe.missouri.edu	Educational and Counseling Psychology	Program	Rick Jay Short, James Koller, Craig Frisby, Greg Holliday, Maria Gutierrez	S 6, D 21	75%	Ed.S, Ph.D	S 4, D 2
—MONTANA—									
University of Montana Psychology Department, University of Montana Missoula, MT 59812 www.umt.edu/grad	S: NN	George C. Camp Ph: 406-243-4521 Fax: 406-243-6366 psycgrad@selway.umt.edu	Psychology	Program	George Camp	S 16	44%	M.A., Ed.S	S 6

—Nebraska—

University of Nebraska - Kearney Department of Counseling and School Psychology, Founders Hall Room 2102 Kearney, NE 68849 www.unk.edu	S: NN	Max McFarland Ph: 308-865-8318 Fax: 308-865-8097 mcfarlandm@unk.edu	Counseling and School Psychology	Program	Max McFarland, Jean Ramage, Theresa McFarland, Teana Archuanety	S 50	20%	Ed.S.	S 10
University of Nebraska - Lincoln 117 Bancroft Hall, Depatment of Educational Psychology Lincoln, NE 68588-0345 www.unl.edu/schpsych	S: NN D: NN, APA	Terry B. Gutkin Ph: 402-472-1154 Fax: 402-472-8319 tgutkin@unlserve.unl.edu	Educational Psychology	Graduate Admissions Office, 116 Henzlik Hall, Lincoln, NE 68588-0385	Terry Gutkin, Sue Sheridan, Susan Swearer, Beth Doll, Harold Keller	S 22, D 29	45%	Ed.S., Ph.D.	S 4, D 4
University of Nebraska - Omaha Department of Psychology, 347 Arts & Sciences Hall, 60th at Dodge Omaha, NE 68182 http://crd.unomaha.edu/~psychweb	S: NN	Robert H. Woody Ph: 402-554-2592 Fax: 402-554-2556 rwoody@cwis.unomaha.edu	Psychology	Program	Robert Woody, Lisa Kelly-Vana, Norm Hamm	S 25	10%	M.A., M.S., Ed.S.	S 3

—New Jersey—

Fairleigh Dickinson University Psychology Department, Fairleigh Dickinson University, 1000 River Rd, T-WH1-01 Teaneck, NJ 07666 www.fdu.edu		Ron Dumont Ph: 201-692-2464 Fax: 201-692-2304 dumont@mailbox.fdu.edu	Psychology	Program	Ron Dumont, Judith Kaufman, Linda Reddy	S 55, D 38	10%	M. A., Psy.D.	S 7
Georgian Court College Department of Psychology, Georgian Court College, 900 Lakewood Ave Lakewood, NJ 08701 www.georgian.edu		Lorraine Licata, Coordinator Ph: 732-364-2200 Fax: 732-367-7301 licata@georgian.edu	Psychology	Program	Lorraine Licata , Linda James, Christopher Trigani, Joseph Springer	S 8	0%	M.A.	S 3
Kean University Department of Psychology Union NJ 07083-9982 www.kean.edu/~schpsych/school_psychology.html	S: NN	Dennis R. Finger Ph: 908-527-2181 Fax: 908-629-7044 schpsych@turbo.kean.edu	Psychology	Graduate Admissions, Office of Graduate Studies, Kean University,Union, NJ 07083	Dennis Finger, Adrienne Garro, Rosa Bianco, Robert Roth, Rhoda Feigenbaum	S 66	18%	M.A., Professional Diploma	S 9
Montclair State University Psychology Department Upper Montclair, NJ 07043 www.chss.montclair.edu/psychology/		Ofelia Rodriguez-Srednicki Ph. 973-655-7925 Fax: 973-655-5121 rodriguezo@mail.montclair.edu	Psychology	Graduate Office, Montclair State University, Upper Montclair, NJ 07043	Ofelia Rodriguez-Srednicki, Anthony D'Urso,Timothy Lionetti	S 68	15%	M.A .	S 10
New Jersey City University 2039 Kennedy Blvd Jersey City, NJ 07305 www.njcu.edu		Jim Lennon Ph: 201-200-3309 Fax: 201-200-3082 jlennon@njcu.edu	Psychology	Program	James Lennon, Andrew Getzfeld, Linda Lyons	S 18		Professional Diploma in School Psychology	S 6

School/Address/Web site	*Accred.*	*Director*	*Dept.*	*Application Info.*	*Prim. Faculty*	*EN*	*FA*	*DA*	*YG*
Rider University 2083 Lawrenceville Road Lawrenceville, NJ 08648 http://www.rider.edu		Kathleen McQuillan Ph: 609-895-5486 Fax: 609-896-5362 kmcquillan@rider.edu	Graduate Education	Program	Kathleen McQuillan, James Murphy	S 30	0%	Ed.S.	S 7
Rowan University Special Education Department, Robinson Hall, 201 Mullica Rd. Glassboro, NJ 08244 http://spider.rowan.edu/mars/depts/speced/maschpsy.htm	S: NN	John W. Klanderman Ph: 609-256-4500 x 3797 Fax: 609-926-8452 klanderman@rowan.edu	Special Education	The Graduate School, Memorial Hall, Rowan University, 201 Mulica Hill Road Glassboro, NJ 08028	John Klanderman, Roberta Dihoff, Hector Rios, Barbara Williams, Rosemary Mennuti , Mark Chapel	S 62	34%	M.A., Ed.S.	S 15
Rutgers University 152 Frelinghuysen Road Piscataway, NJ 08855-0819 gradstudy.rutgers.edu	D: APA	Kenneth Schneider Ph: 732-445-2008 Fax: 732-445-4888 kirchner@gsapp.rutgers.edu	Applied Psychology	Rutgers University, Graduate Admissions, 18 Bishop Place, New Brunswick, NJ 08901	Kenneth Schneider, Nancy Fagley, John Kalafat, Charles Maher, Cary Cherniss, Karen Haboush, Judith Springer	D 58	75%	Psy.D	D 10
Seton Hall University Dept of Professional Psychology & Family Therapy South Orange, NJ 7079 http://www.shu.edu/academic.html		Thomas Massarelli Ph: 973-761-9450 Fax: 973-275-2188 massarth@shu.edu	Professional Psychology and Family Therapy	Program	Thomas Massarelli, Cheryl Thompson, Arnold Derosa	S 40		M.A., Ed.S.	S 8
—NEW MEXICO—									
New Mexico State University Department 3SPE, Box 30001, New Mexico State University Las Cruces, NM 88003-8001 www.nmsu.edu/~colgeduc/Dept_Fac/Spec_Ed/		Robert Rhodes/Enedina Vazquez Ph: 505-646-5972 Fax: 505-646-7712 rorhodes@nmsu.edu	Special Education/Communication Disorders and Counseling and Educational Psychology	Program	Robert Rhodes, Enedina Vazquez, Eric Lopez , Louis Vazquez	S 21	25%	Ed.S.	S 6
—NEVADA—									
University of Nevada - Las Vegas College of Education, UNLV Las Vegas, NV 89154 http://www.nscee.edu/unlv/Colleges/Education/EP/pse.htm	S: NN	Joe N. Crank Ph: 702-895-3205 Fax: 702-895-0984 crank@nevada.edu	Special Education	Graduate College, UNLV, 4505 Maryland Parkway, Box 451017, Las Vegas, NV 89154	Joe N. Crank, Sherri Strawser	S 40	20%	Ed.S.	S 10
University of Nevada - Reno Department of Counseling and Educational Psychology Reno, NV 89557-0214 http://www.unr.edu/colleges/educ/cep/edsedpsc.html		Steven Harlow Ph: 702-784-6637 Fax: 702-784-6298 sdh@unr.edu	Counseling and Educational Psychology	Program	Steven Harlow, Rhonda Cummings, Gary Fisher, Mary Maples, LaMont Johnson, Cleg Maddux, Livia D'Andrea, Jack Casey	S 12, D 3	20%	Ed.S., Ed.D., Ph.D.	S 5, D 1
—NEW YORK—									
Alfred University Division of School Psychology, Saxon Drive Alfred, NY 14802-1232 www.alfred.edu	S: NN D: APA	Edward Gaughan Ph: 607-871-2212 Fax: 607-871-2342 fgaughan@alfred.edu	School Psychology Program	Graduate Admissions Office, Alfred University, Saxon Drive, Alfred, NY 14802	Edward Gaughan, John Cerio, Jana Atlas, Nancy Evangelista, Mark Fugate, Timothy Keith	S 42, D 35	100%	M.A., C.A.S., Psy.D	S 18, D 6

City University of New York - Brooklyn College 2900 Bedford Avenue, School of Education, School Psychology Program, 1105 James Hall Brooklyn, NY 11210 http://depthome.brooklyn.cuny.edu/schooled	S: NN	Laura Barbanel Ph: 718-951-5876 Fax: 718-951-4232 barbanel@brooklyn.cuny.edu	Education	Program	Laura Barbanel, Florence Rubinson, Grace Elizaldi-Utnick	S 85		M.S., Certificate	S 20
City University of New York - GSUC Graduate Center, 365 Fifth Ave. New York, NY 10016 www.gc.cuny.edu	D: APA	Philip A. Saigh Ph: 212-817-8292 Fax: 212-817-(unknown) rpalant@email.gc.cuny.edu	Educational Psychology	Program	Philip Saigh, Georgiana Shick-Tryon, Marian Fish, Joseph LiPuma	D 45		Ph.D.	D 6
City University of New York - Queens College Graduate Program in School Psychology Division of Education Flushing, NY 11367 www.qc.edu/ECP/schpsych/index.htm	S: NN	Marian Fish Ph: 718-997-5230 Fax: 718-997-5248 mfish@gc.cuny.edu	Educational and Community Programs	Graduate Admissions Office, Queens College, CUNY, Flushing, NY 11367	Marian Fish, David Goh, Emilia Lopez, Roslyn Ross	S 95	15%	M.S., Certificate	S 22
College of New Rochelle 29 Castle Place New Rochelle, NY 10805 http://www.cnr.edu/grs.htm		Claire Lavin Ph: 914-632-5561 Fax: 914-654-5593 clavin@cnr.edu	Human Services Division	Program	Claire Lavin, Robert Arko, James Magee	S 60	25%	M.S.	S 20
Columbia University - Teachers College Box 120, Teachers College, Columbia University, 525 W 120 th St New York, NY 10027 http://www.tc.columbia.edu/depts/9depts.html	D: APA	Stephen Peverly Ph: 212-678-3942 Fax: 212-678-4048 stp4@columbia.edu	Health and Behavior Studies	Office of Admissions, Box 302, Teachers College, Columbia University, New York, NY 10027	Stephen Peverly, Marla Brassard, Ursula Kirk	S 46, D 43	25%	Ed.M., Ed.D.	S 10, D 5
Fordham University Graduate School of Education, 113 West 60th St New York, NY 10023 www.fordham.edu	S: NN D: NN, APA	Vincent C. Alfonso Ph: 212-636-6481 Fax: 212-636-6416 alfonso@fordham.edu	Psychological and Educational Services	Office of Admissions, Graduate School of Education, Rm 1115	Vincent C. Alfonso, Anthony Cancelli, Karen Brobst, Giselle Esquivel, Abigail Harris , Laura Kestemberg	S 62, D 70	14%	Professional Diploma, Ph.D	S 11, D 3
Hofstra University 127 Hofstra University, Psychology Department Hempstead, NY 11550 www.hofstra.edu	D:NN, APA	Vincent Guarnaccia Ph: 516-463-5662 Fax: 516-463-6052 psyvjg@hofstra.edu	Psychology	Apply to above address	V. Guarnaccia, H. Kassinove, P. Ohr, A. Akin-Little M. Schare, K.Salzinger, R. O'Brien	D 137	15%	Ph.D.	D 24
Marist College Department of Psychology, Dyson Center Poughkeepsie, NY 12601-1387 www.marist.edu		Paul Egan Ph: 845-575-3000 x2135 Fax: 845-575-3695 paul.j.egan@marist.edu	Psychology	Graduate Admissions, Marist College, Poughkeepsie, NY 12601	Paul Egan, William Van Ornum, Joseph Canale	S 54	50%	M.A.	S 16

School/Address/Web site	*Accred.*	*Director*	*Dept.*	*Application Info.*	*Prim. Faculty*	*EN*	*FA*	*DA*	*YG*
New York University School Psychology, NYU, 239 Greene Street, Rm 537 New York, NY 10003 www.nyu.edu/education/appsych	D: NN, APA	Iris Fodor Ph: 212-998-5367 Fax: 212-260-8719 ief@nyu.edu	Applied Psychology	Program	Iris Fodor, Judith Alpert, Lawrence Balter, Ester Buchholz, Gilbert Trachtman, Marilyn Varadi	S 8, D 115	35%	M.A, Certification in S.P., Psy.D., Ph.D.	S 1, D 17
Pace University Psychology Department, 1 Pace Plaza New York, NY 10038 http://www.pace.edu/dyson/dyson.html	D: APA	Barbara A. Mowder Ph: 212-346-1506 Fax: 212-346-1618 bmowder@pace.edu	Psychology	Graduate Admissions, Pace University	Barbara Mowder, Leonard Bart, Beth Hart, Jack Herman, John Stokes, June Chisholm	S 60, D 92	65%	M.S.Ed, Psy.D.	S 20, D 20
Plattsburgh State University Psychology Dept, 101 Broad St. Plattsburgh, NY 12901 http://www.plattsburgh.edu/psy/gradprog.html		James B. Hale Ph: 518-564-3395 Fax: 518-564-3397 james.hale@plattsburgh.edu	Psychology	Admissions Office, Kehoe Building, SUNY-Plattsburgh, 101 Broad St. Plattsburgh, NY 12901	James Hale, Gregg Macmann, Jeanne Ryan		10%	M.A.	MA/CAS: 8
Rochester Institute of Technology 1 Lomb Memorial Drive School Psychology Program Rochester, NY 14623-5604 www.rit.edu	S: NN	V.K. Costenbader Ph: 716-475-6701 Fax: 716-475-6715 vkcgsp@ritvax.1sc.rit.edu	School Psychology	Office of Admissions, Bauch & Lomb Center, 60 Lomb Memorial Drive Rochester, NY 14623-5604	Virginia Costenbacher, Jennifer Lukomski, Paul McCabe	S 40	100%	M.S./ Certificate of Advanced Study	S 18
St. John's University Department of Psychology, 8000 Utopia Parkway Jamaica, NY 11439 www.stjohns.edu/academics/programs/grad_programs.html	S: NN	Raymond DiGuiseppe Ph: 718-990-1546 Fax: 718-990-5926 digiuser@stjohns.edu	Psychology	Graduate Admissions Office, St. John's University	R. DiGiuseppe, D. Flanagan, Z. Zhou, M. Tejersen, M. Beasley, S. Ortiz	S 108, D 62	25%	M.S., Psy.D.	S 22
State University of New York - Buffalo 409 Baldy Hall, Department of Counseling & Education, SUNY Buffalo, NY 14260 http://www.gse.buffalo.edu/DC/CEP/CEP_SP.htm	S: NN D: APA	LeAdelle Phelps Ph: 716-645-3154 Fax: 716-645-6616 Phelps@acsu.buffalo.edu	Counseling and Educational Psychology	Program	LeAdelle Phelps, Pat Logan, Steve Truscott, Nancy Zoeller	S 24, D 12	100%	M.A., Ph.D.	S 8, D 3
State University of New York - Oswego CPS #13, SUNY Oswego, NY 13126 http://www.oswego.edu/~gradoff/FieldofStudy.html	S: NN	Betsy Waterman Ph: 315-341-4051 Fax: 315-341-3198 waterman@oswego.edu	Counseling and Psychological Services	Program	Thomas Cushman, Janet Carlson, Betsy Waterman, Gerald Porter	S 45	80%	M.S./ C.A.S.	S 15

Syracuse University Psychology Department, 430 Huntington Hall Syracuse, NY 13244-2340 http://psychweb.syr.edu.html	D: APA	Brian K. Martens Ph: 315-443-3835 Fax: 315-443-4085 bkmarten@psych.syr.edu	Psychology	Graduate Admissions Office, Syracuse University, Syracuse, NY 13244	Brian Martens, Lawrence Lewandowski, Tanya Eckert, Benita Blachman	D 24	100%	M.S., Ph.D.	D 5
Touro College 27 W. 23rd St., Room 536 New York, NY 10010 www.touro.edu/edgrad		Carol S. Lidz Ph: 212-463-0400 x777 Fax: 212-462-4889 zdilsc@aol.com	School Psychology	No longer accepting new students	Carol S. Lidz, Boris Gindis	S 21		M.A., Certificate	S 12
University at Albany-Suny 1400 Washington Avenue-Education 232 Albany, NY 12222 www.albany.edu/schoolpsych	D: APA	Douglas K. Smith Ph: 518-442-5052 Fax: 518-442-4953 smeissner@uamail.albany.edu	Educational and Counseling Psychology	Graduate Admissions - UAB 121, 1400 Washington Ave., Albany, NY 12222	Douglas K. Smith, Deborah Kundert, Joan Newman, David Miller, Maureen Cohan, Denise De Zolt	S 6, D 43	100%	C.A.S., Psy.D.	S 3, D 5
Yeshiva University Ferkauf Graduate School of Psychology, 1300 Morris Park Ave Bronx, NY 10461 www.education.wisc.edu/ed psych.index.html	D: NN, APA	Abraham Givner Ph: 718-430-3945 Fax: 718-430-3960 givner@aecom.yu.edu	Psychology	Program	Abraham Givner, Barbar Gerson, Gilbert Foley, Louise Silverstein, Susan Warshaw, Joyce Weil, Lillian Zach, Esther Stavrov	D 125	70%	Psy.D.	D 30
—NORTH CAROLINA—									
Appalachian State University Department of Psychology, Appalachian State University Boone, NC 28607 www.appstate.edu/dept/psych	S: NN	Jim Deni Ph: 828-262-2728 Fax: 704-262-2974 denijr@appstate.edu	Psychology	Appalachian State University, Graduate School, B.B. Dougherty Administration Building, Boone, NC 28607	Jim Deni, Eric Hatch, Pam Kidder Ashley	S 34	100%	M.A/ C.A.S	S 10
East Carolina University Department of Psychology, Rawl 105 Greenville, NC 27834-4353 www.ecu.edu/psyc/grad/school	S: NN	Michael B. Brown Ph: 252-328-4170 Fax: 252-328-6283 brownmi@mail.ecu.edu	Psychology	Program	Michael B. Brown, Larry Bolen	S 22	75%	M.A., C.A.S.	S 8
North Carolina State University Department of Psychology Box 7801 Raleigh, NC 27695-7801 www.ncsu.edu/psychology/ graduate/conc/school/	D: NN, APA	William P. Erchul Ph: 919-515-2251 Fax: 919-515-1716 william_erchul@ncsu.edu	Psychology	Graduate Admissions, North Carolina State University, 104 Peele Hall, Box 7102 Raleigh, NC 27695-7102	William P. Erchul, Patricia Horan, Mary Haskett, Ann Schulte, Marcia Bingham, Patricia Collins	D 20	100%	M.S., Ph.D.	D 3
University of North Carolina - Chapel Hill 112 Peabody Hall, Education CB #3500 Chapel Hill, NC 27599-3500 http://www.soe.unc.edu/depts/ed/ schpsy	S: NN D: NN, APA	Walter B. Pryzwansky Ph: 919-962-8689 Fax: 919-962-1533 walterbp@email.unc.edu	School Psychology	Web Page, Graduate School, UNC-CH	Walter Pryzwansky, Martha Petoskey, Rune J. Simeonsson, John Brantley,Barbara Hanna Wasik	S 17, D 25	70%	M.A/ M.Ed, Ph.D	S 6, D 5

School/Address/Web site	*Accred.*	*Director*	*Dept.*	*Application Info.*	*Prim. Faculty*	*EN*	*FA*	*DA*	*YG*
Western Carolina University Department of Psychology, 311 Killian Building Cullowhee, NC 28723 www.wcu.edu/cc/onlineRes/infosheets/spsspc.html	S: NN	Candace Boan Ph: 704-227-7361 Fax: 704-227-7388 cboan@wcu.edu	Psychology	Graduate School, Western Carolina University, Cullowhee, BC 28723	Candace Boan, Mickey Randolph, Harrison Kane, Shawn Acheson, Bruce Henderson, Hedy White, Robin Kowalski	S 19	100%	M.A.	S 6
—North Dakota—									
Minot State University 500 West University Avenue Minot, ND 58707 www.minotstateu.edu	S: NN	Alisha Ford Ph: 701-858-3099 Fax: 701-858-4262 fordalis@minotstateu.edu	Psychology	Dr. Brent Askvig, Director of Graduate Studies, Memorial Hall, Minot, ND 58707	Philip Hall, Alisha Ford	S 23	100%	Ed.S.	S 6
—Ohio—									
Bowling Green State University EDSE #403, Education Building, Bowling Green State University Bowling Green, OH 43403-0255 http://edap.bgsu.edu/EDSE/	S: NN	Audrey Ellenwood Ph: 419-372-9848 Fax: 419-372-8265 aellenw@bgnet.bgsu.edu	Division of Intervention Services	Program	Audrey Ellenwood, Edward Fiscus	S 25	100%	M.Ed	S 9
Cleveland State University Department of Psychology, 2300 Chester Ave Cleveland, OH 44115-3696 http://www.asic.csuohio.edu/psy/grad.html	S: NN	Kathy McNamara Ph: 216-687-2521 Fax: 216-687-9294 k.mcnamara@csuohio.edu	Psychology	Office of Graduate Admissions, RT 204, Campus Box G, Cleveland State University, Cleveland, OH 44115	Kathy McNamara, Colleen McMahon, Norma Cofresi, Leigh Ann Forsyth, Stephen Slane, Deborah Plummer	S 29	100%	M.A., Psy.S.	S 8
John Carroll University Administration Bldg., Department of Education and Allied Studies University Hts, OH 44118 http://www1.jcu.edu/educatio/programs.htm	S: NN	Jeanne E. Jenkins Ph: 216-397-4656 Fax: 216-397-3045 jjenkins@jcu.edu	Education and Allied Studies	Graduate School, John Carroll University, Administration Building, University Heights, OH 44118	Jeanne Jenkins, John Guidibaldi	S 27	24%	M.Ed	S 8
Kent State University 405 White Hall, Kent State University Kent, OH 44242 spsy.educ.kent.edu	S: NN D: NN, APA	Cathy Telzrow Ph: 216-672-0606 Fax: 330-672-2512 ctelzrow@educ.kent.edu	Educational Foundations and Special Services	Program	Cathy Telzrow, Caven Mcloughlin, Kara McGoey	S 47, D 16	100%	M.Ed., Ed.S., Ph.D.	S 15 D 2
Miami University 201 McGuffey Hall Oxford, OH 45056 www.muohio.edu/edp/	S: NN	Alex Thomas Ph: 513-529-6621 Fax: 513-529-3646 thomasa@muohio.edu	Educational Psychology	Program	Alex Thomas, Raymond Witte, Katherine Wickstrom	S 33	100%	M.S., Ed.S.	S 10
Ohio State University 1945 North High Street, 356 ARPS Hall Columbus, OH 43210 www.coe.ohio-state.edu	S: NN D: NN	Antoinette Miranda Ph: 614-292-5909 Fax: 614-292-4255 miranda.2@osu.edu	School of Physical Activity and Educational Services	Office of Student and Academic Programs, 215 Pomerene Hall, 1760 Neil Ave., Columbus, OH 43210 614-292-6787	Antoinette Miranda, Laurice Joseph	S 14, D 9	58%	M.A., Ph.D.	S 10, D 3

University of Cincinnati School Psychology Program, PO Box 210002 Cincinnati, OH 45221-0002 www.education.uc.edu	S: NN D: NN, APA (on probation)	Janet Graden Ph: 513-556-3335 Fax: 513-556-3898 janet.graden@uc.edu	Human Services	Program	Janet Graden, Sarah Allen, David Barnett, Kevin Jones, Francis Lentz	S 22, D 37	100%	M.Ed., Ph.D.	S 10, D 5
University of Dayton 300 College Park Dayton, OH 45469-0530 www.udayton.edu/edu/departments/edc/schoolpsych.html	S: NN	Sawyer A. Hunley Ph: 937-229-3644 Fax: 937-229-1055 sawyer.hunley@notes.udayton.edu	Counselor Education and Human Services	Program	Sawyer A. Hunley, James Evans	S 44	25%	M.S., Ed. S.	S 10
University of Toledo College of Health and Human Services, 2801 West Bancroft St Toledo, OH 43606-3390 cmhs.utoledo.edu		Jerome Zake Ph: 419-530-2718 Fax: 419-530-7879 jerome.zake@utoledo.edu	Counseling and Mental Health Services	Suzanne Martin, Counseling and Mental Health Services, #119, University of Toledo, 2801 W. Bancroft St. Toledo, OH 43606-3390	Jerome Zake, Robert Wendt	S 23, D 2	18%	M.Ed., Ed. S., Ph.D.	S 8, D 1
—Oklahoma—									
Oklahoma State University School of Applied Health and Educational Psychology, 434 Willard Hall Stillwater, OK 74708 www.pio.okstate.edu	S: NN Conditional D: NN, APA	Terry A. Stinnett Ph: 405-744-9629 Fax: 405-744-6756 tas@okstate.edu	Applied Health and Educational Psychology	Graduate Records, COE, Attn. Cindy Jones, 327 Willard, Okalahoma State University	Terry Stinnett, Judy Oehler-Stinnett	S 6, D 20	90%	Ed.S., Ph.D.	S 5, D 5
University of Central Oklahoma Department of Psychology, 100 N. University Drive Edmond, OK 73034 www.ucok.edu		Peggy Kerr, Ph.D Ph: 405-974-5477 Fax: 405-974-3822 pkerr@ucok.edu	Psychology	Program	Peggy Kerr	Certification: 53	5%	M.A., Certification	Certification: 10
—Oregon—									
Lewis and Clark College MSC 86, 0615 Palatine Hill Rd., Portland, OR 97219 Portland, OR 97219 www.lclark.edu/dept/cpsy	S: NN Conditional	Mary Henning-Stout Ph: 503-768-6060 Fax: 503-768-6065 cpsy@lclark.edu	Counseling Psychology	Program	Mary Henning-Stout, Peter Mortola, Amy Rees	S 55	90%	M.S.	S 15
University of Oregon School Psychology Program, 5208 University of Oregon Eugene, OR 97403-5208 interact.uoregon.edu/DSECR/sp.htm	D: NN, APA	Roland H. Good III Ph: 541-346-5501 Fax: 541-346-2897 RHGood@darkwing.uoregon.edu	Special Education Area	Program	Roland Good, Ruth Kaminski, Deanne Crone, Nancy Bank	S 5, D 43	Varies	M.S., Ph.D.	S 1, D 5
—Pennsylvania—									
Bryn Mawr College Department of Psychology, 101 N. Merion Ave Bryn Mawr, PA 19010 www.brynmawr.edu		Leslie Rescorla Ph: 610-527-5190 Fax: 610-527-2879 lrescorl@brynmawr.edu	Psychology	S - Program; D - Grad School of Arts and Sciences, 101 N. Merion Ave, Bryn Mawr, PA 19010	Leslie Rescorla, Kim Cassidy, Robert Wozniak, Marc Schulz	S 2, D 12	S - 0%; D - 100%	M.A., Ph.D.	S 2, D 7

School/Address/Web site	*Accred.*	*Director*	*Dept.*	*Application Info.*	*Prim. Faculty*	*EN*	*% FA*	*DA*	*YG*
Bucknell University School Psychology Program, 459 Olin Science Lewisburg, PA 17837 www.bucknell.edu/departments/education		Candace R. Logan Ph: 5700-577-1324 logan@bucknell.edu	Education	Program	Candace R. Logan; Leslie Babiuski; Steve Knotek	S 24	100%	M.S.Ed	S 8
California University of Pennsylvania 250 University Ave, Psychology Dept, Box 65, LRC 317 California, PA 15419 http://www.cup.edu/		Kirk R. John Ph: 412-938-4100 Fax: 724-938-4406 John_K@cup.edu	Psychology	California University of PA, School of Graduate Studies, 250 University Ave, Box 91, California, PA 15419	Kirk John, Elizabeth Mason, Sam Lonich, Gail Ditkoff, Richard Scott, Nickolas Martin, Holiday Adair, Dennis Sweeney, Richard Cavasina	S 42	20%	M.S.	S 11
Duquesne University Dept of Counseling, Psychology and Special Education, Canevin Hall Pittsburgh, PA 15282 http://schoolpsych.duq.edu	S: NN Conditional	Joseph C. Kush Ph: 412-396-4794 Fax: 412-396-5585 kush@duq.edu	Counseling, Psychology and Special Education	Program	Joseph Kush, Jeffrey Miller, Tammy Hughes, Kim Blair	S 65	80%	M.S.Ed., C.A.G.S	S 12
Edinboro University of Pennsylvania 114B Butterfield Hall Edinboro, PA 16444 http://www.edinboro.edu/cwis/acaff/gradstudy/gradhome.html		Joel Erion Ph: 814-732-2200 Fax: 814-732-2268 jerion@edinboro.edu	Special Education and School Psychology	Office of Graduate Studies, Edinboro University of Pennsylvania, Edinboro, PA 16444	Joel Erion, Ed Snyder	S 50	25%	Ed.S	S 12
Immaculata College Box 500, Immaculata College Immaculata, PA 19345 www.immaculata.edu		Jed Yalof/ Pam Abraham Ph: 610-647-4400 x 3464 Fax: 610-993-8550 pabraham@immaculata.edu	Graduate Psychology	Sandra Rolleson, Director, Graduate Admissions, Immaculata, PA 19345	Pamela Abraham, Jed Yalof	S 43, Psy.D 5	0%	M.A., Certification	S 14
Indiana University of Pennsylvania 246 Stouffer Hall, Department of Educational and School Psychology Indiana, PA 15705 www.iup.edu/ep/	S: NN D: NN	John P. Quirk/ Victoria B. Damiani Ph: 724-357-2316 Fax: 724-357-6946 jpquirk@grove.iup.edu or vdamiani@grove.iup.edu	Educational and School Psychology	Program	John Quirk, Victoria Damiani, Gurmal Rattan, Robert Hoellein, Edward Levinson, Mary Ann Rafoth	S 34, D 79	100%	M.Ed., Ed.D.	S 14, D 6
Lehigh University School Psychology Program, College of Education, 111 Research Drive, Iococca Hall Bethlehem, PA 18015-8765 www.lehigh.edu/~ineduc/SPmain.html	S: NN D: NN, APA	George DuPaul Ph: 610-758-3256 Fax: 610-758-6223 gjd3@lehigh.edu	Education and Human Services	Program	George DuPaul, Edward Shapiro, Christine Cole, James C. DiPerna, Patricia Manz, David Miller	S 18, D 36	100%	Ed.S., Ph.D.	S 4, D 3
Marywood University McGowan Center, Marywood University Scranton, PA 18509-1598 http://www.marywood.edu/gas/counsel.htm		Kathleen A. Marjinsky Ph: 570-348-6211 ext. 2315 Fax: 717-961-4744 marjinsky@es.marywood.edu	Psychology and Counseling	Graduate School of Arts & Sciences, Psychology & Counseling Department School Psychology Program, 2300 Adams Ave, Scranton, PA 18509-1598	Kathleen Marjinsky, Ronald Miller, Rita Miller	S 33	5%	M.A.	S 5

Millersville University of Pennsylvania Department of Psychology, Byerly Hall Millersville , PA 17551 www.millersville.edu	S: NN	Katherine Green Ph: 717-872-3709 Fax: 717-871-2480 katherine.green@millersville.edu	Psychology	Program	Katherine Green, Helena Tuleya Payne	S 50	10%	M.S.	S 10
Pennsylvania State University 227 Cedar Building, Penn State University University Park, PA 16802-3109 espse.ed.psu.edu/spsy/spsy.ssi	D: NN, APA	Marley Watkins Ph: 814-865-1881 Fax: 814-863-1002 mww@psu.edu	Educational and School Psychology and Special Education	Program	Marley Watkins, Frank Worrell, Robert Hale, Barbara Schaefer	D 31	80%	M.S., Ph.D.	D 5
Temple University Rittler Annex 269, 1301 Cecil B. Moore Philadelphia, PA 19122 www.temple.edu/education/pse/schpsypgm.html	S: NN D: NN, APA	Joseph G. Rosenfeld Ph: 215-204-8075 Fax: 215-204-6013 schpsych@temple.edu	Psychological Studies in Education	Program	Joseph Rosenfield, Irwin Hyman, Catherine Fiorello, Joseph Ducette, Frank Farley, T. Chris Tillman, Louisa Lurkis	S 8, D 98	13%	M.Ed/CSP, Ph.D.	S 3, D 13
University of Pennsylvania Graduate School of Education, 3700 Walnut St Philadelphia, PA 19104-6216 www.upenn.edu/gse/	D: APA	Raymond P. Lorion Ph: 215-898-7367 Fax: 215-573-2115 lorion@gse.upenn.edu	Psychology in Education	Program	Raymond P. Lorion, Paul McDermott, John Fantuzzo, Amy Sichel, Howard Stevenson, Dianne Salter, Jeanne Stanley	D 16		Ph.D.	D 4
—Rhode Island—									
Rhode Island College Department of Counseling and Educational Psychology, 108 Adams Providence, RI 02908 www.ric.edu/academics/		Mifrando Obach Ph: 401-456-8023 Fax: 401-456-9628 mobach@ric.edu	Counseling and Educational Psychology	School Psychology Program, 600 Mt. Pleasant Ave, Providence, RI 02908	Mifrando Obach, Krista Robertson, Mary Wellman	S 49		M.A./Certificate of Advanced Graduate Study	S 9
University of Rhode Island Department of Psychology, 10 Chafee Road, Suite 8 Kingston, RI 02881-0808 www.psy.uri.edu/artsci/psy/schpsy	S: NN Conditional D: NN, APA	Paul Bueno de Mesquita Ph: 401-874-4216 Fax: 401-874-2157 jkulberg@uriacc.uri.edu	Psychology	Program	Paul Bueno de Mesquita, Susan Brady, W.Grant Willis, Margaret Rogers, Danel Koonce, Nansook Park, Janet Kulberg	S 9, D 27	86%	M.S., Ph.D.	S 0, D 2
—South Carolina—									
Francis Marion University Dept of Psychology and Sociology, P.O Box 100547 Florence, SC 29501-0547 http://aplha1.fmarion.edu/psych		Sam F. Broughton Ph: 803-661-1638 Fax: 803-661-1628 sbroughton@fmarion.edu	Psychology and Sociology	Program	Sam Broughton, Robert Bridger, John Hester	S 29	48%	M.S.	S 5
The Citadel Department of Psychology, 171 Moultrie St Charleston, SC 29409 www.citadel.edu/	S: NN	Nancy Bell Ph: 843-953-5320 Fax: 843-953-6797 nancy.bell@citadel.edu	Psychology	College of Graduate and Professional Studies, Bond Hall, 171 Moultrie St., Charleston, SC 29409	Nancy Bell, Michael Politano, K. Lassiter, A. Finch	S 50	50%	M.A., Ed.S	S 14

School/Address/Web site	Accred.	Director	Dept.	Application Info.	Prim. Faculty	EN	FA	DA	YG
University of South Carolina Department of Psychology, Barnwell College Columbia, SC 29208 http://www.cla.sc.edu/PSYC/schprog.htm	D: NN, APA	Richard J. Nagle Ph: 803-777-4137 Fax: 803-777-9558 nagle@sc.edu	Psychology	Department of Psychology, Graduate Admissions, Attn: Doris Davis Barnwell College, USC, Columbia, SC 29208	Richard Nagle, Frederic Medway, James Evans, Laurie Ford, Scott Huebner, Marion Burns, Pauline Pagliocca, Julia Mendez, Lorraine Taylor, Bradley Smith	D 7	100%	Ph.D.	D 5
Winthrop University Psychology Department, 135 Kinard Hall, Winthrop University Rock Hill, SC 29733 www.winthrop.edu	S: NN	Joseph Prus Ph: 803-323-2117 Fax: 803-323-2347 prusj@winthrop.edu	Psychology	Office of Graduate Studies, Winthrop University, Rock Hill, SC 29733	Joseph Prus, Gary Alderman, Antigo Martin, Letha Maxton	S 25	90%	M.S., S.S.P.	S 8
—South Dakota—									
University of South Dakota Counseling and Psychology in Education, School of Education Vermillion, SD 57069 www.usd.edu/cpe/school%20psych/spsy.html	S: NN	Hee-sook Choi Ph: 605-677-5250 or 606-677-5847 Fax: 605-677-5438 hchoi@usd.edu	School Psychology	Program	Hee-sook Choi, Patricia Work, Bruce Proctor, Dale Pietrzak	S 16, D 6	52%	Ed.S., Ph.D.	S 7, D 2
—Tennessee—									
Austin Peay State University PO Box 4537, APSU, Psychology Department Clarksville, TN 37044 www.apsu.edu		Maureen McCarthy Ph: 931-648-7233 Fax: 931-648-6267 mccarthym@apsu.edu	Psychology	Program	Maureen McCarthy, Patti Wilson, Rick Greive	S 2	80%	M.A., Ed.S	S 3
Middle Tennessee State University Box 533, MTSU Station Murfreesboro, TN 37132 www.mtsu.edu/~psycholo/	S: NN	James O. Rust Ph: 615-898-2319 Fax: 615-898-5027 jorust@mtsu.edu	Psychology	Graduate College, Middle Tennessee State University, Murfreesboro, TN 37132	James Rust, Susan Sobel, Gloria Hamilton, Ellen Slicker	S 15	25%	M.A., Ed.S.	S 8
Tennessee State University Psychology Department, 3500 John A. Merritt Blvd Nashville, TN 37209-1561 www.tnstate.edu		Lynn M. Boyer Ph: 615-963-1559 Fax: 615-963-5140 LBoyer@tnstate.edu	Psychology	Program	Lynn Boyer, Cornell Lane	S 10, D 14	25%	Ed.S., Ph.D.	D 1
Tennessee Technological University Box 5034 Cookeville, TN 38505 www.tntech.edu		Jann D. Cupp Ph: 931-372-3457 Fax: 931-372-3722 jcupp@tntech.edu	Counseling and Psychology	Dean of Graduate Studies, Box 5036, TTU, Cookeville, TN 38505	Jann D. Cupp, Michael Rohr	S 17	20%	M.A., Ed.S	S 3
University of Memphis Department of Psychology, The University of Memphis, Room 202 Memphis, TN 38152-3230 http://www.psyc.memphis.edu/psych.htm	S: NN	Thomas K. Fagan Ph: 901-678-4676 Fax: 901-678-2579 tom-fagan@mail.psyc.memphis.edu	Psychology	Program	Tom Fagan, Randy Floyd	S 17, D 7	40%	M.A., Ed.S., Ph.D.	S 3, D 2

University of Tennessee - Chattanooga Graduate Studies Division, College of Education and Applied Professional Studies Chattanooga, TN 37403 www.utc.edu/gradstudies/edsschpsy.html		George Helton Ph: 423-755-4272 Fax: 423-755-5380 George-Helton@utc.edu	Graduate Studies Division	Graduate Studies, 114 Race Hall, 615 McCallie Avenue, Chattanooga, TN 37403-2598	George Helton, Pamela Guess, Ted Miller	S 15	25%	Ed.S.	S 6
University of Tennessee - Knoxville Claxton Complex A-525 Knoxville, TN 37996-3400 http://www.coe.utk.edu/units/pes/programs.html	S: NN D: NN, APA	Christopher H. Skinner Ph: 865-974-8145 Fax: 865-974-0135 cskinne1@utk.edu	Educational Psychology	Graduate Admissions, College of Education, University of Tennessee Knoxville, TN 37996-3400	Christopher Skinner, R. Steve McCallum, Sherry K. Bain, Bob Williams, Luther Kindall, Tom George, Ron Carlini, Kathy Greenburg	S 4, D 27	93%	Ed.S., Ph.D.	S 2, D 5
—Texas—									
Abilene Christian University 210-D Chambers Bldg., ACU Box 28011, Dept of Psychology Abilene, TX 79699 www.acu.edu/psyc		Robert McKelvain Ph: 915-674-2280 Fax: 915-674-6968 mckelvainr@acu.edu	Psychology	Program	E. Scott Perkins, Joann Campbell, Edwin Headrick	S 17	50%	M.S.	S
Baylor University Baylor University, Box 97301 Waco, TX 76798-7301 http://www.baylor.edu/~EDP/baylor_school_psychology.html		Patricia Woods Prewitt Ph: 254-710-6113 Fax: 254-710-3265 patricia_prewitt@baylor.edu	Educational Psychology	Program	Patricia W. Prewitt, Eric Robinson, Thomas Proctor, Terrill F. Saxon	S 21	25%	Ed.S.	S
Our Lady of the Lake University 411 S.W. 24th St San Antonio, TX 78207 http://www.ollusa.edu/academic/secs/default.htm		Cynthia Gonzalez Ph: 210-431-6711 x8152 Fax: 210-436-0824 gonzcy@lake.ollusa.edu	Psychology	OLLU, Office of Admissions	Cynthia Gonzalez, J. Biever, C. de las Fuentes, G. Gardner	S 26	10%	M.S.	S 4
Sam Houston State University Psychology Department Huntsville, TX 77341 www.shsu.edu/~psy_www/	S: NN Conditional	Marsha Harman Ph: 409-294-3875 Fax: 409-294-3798 edu_mjh@shsu.edu	Psychology	Dr. Rowland Miller, Graduate Advisor, Department of Psychology and Philosophy, PO Box 2447, SHSU, Huntsville, TX 77341-2447	Marsha Harman, Richard Eglsaer, Cheryl Hiscock	S 11	20%	M.A.	S 4
Southwest Texas State University Department of Educational Administration & Psychological Services San Marcos, TX 78666 www.swt.edu	S: NN	Alicia Paredes Scribner Ph: 512-245-3083 Fax: 512-245-8872 as08@swt.edu	Educational Administration and Psychological Services	Program	Alicia Paredes Scribner, Cindy Plotts, Edward Scholwinski, S.Sue McCullough, Christabel Jorgenson	S 85	10%	M.A.	S 26
Texas A & M University Department of Educational Psychology College Station, TX 77843-4225 http://www.coe.tamu.edu/~edpsy/	D: NN, APA	Mike Ash Ph: 409-845-1831 Fax: 978-845-1875 mash@tamu.edu	Educational Psychology	Academic Advisor, Department of Educational Psychology TAMU, College Station, TX 77843-4225	Michael Ash, Cecil Reynolds, Jan Hughes, Cynthia Riccio, Jan Hasbrouck, Salvador Hector Ochoa, Karla Anhalt	D 49	100%	Ph.D.	D 4

School/Address/Web site	*Accred.*	*Director*	*Dept.*	*Application Info.*	*Prim. Faculty*	*EN*	*FA*	*DA*	*YG*
Texas A & M University - Commerce School Psychology Program, Texas A&M University Commerce, TX 75429 www.tamu-commerce.edu/coe/psy/schpsym.html		William G. Masten Ph: 903-886-5594 Fax: 903-886-5510 William_Masten@tamu-commerce.edu	Psychology	Program	William Masten, Steve Ball, Dean Ginther	S 15	50%	M.A.	S 5
Texas Woman's University Department of Psychology and Philosophy, PO Box 425470 Denton, TX 76204-0996 www.twu.edu/AS/psyphil/sppc/	S: NN D: NN	Daniel C. Miller Ph: 940-898-2303 Fax: 940-898-2301 dmiller@twu.edu	Psychology and Philosophy	Dr. Hamilton, Admissions Committee Chair	Daniel Miller, Sandra Jimenez, Frank Vitro, Basil Hamilton	S 10, D 33	15%	M.A., Ph.D.	S 2, D 4
The University of Texas Pan American Department of Educational Psychology Edinburg, TX 78539 http://www.panam.edu/colleges/coe.cfm		Ralph Carlson Ph: 210-381-3466 Fax: 210-381-2184 rcarlson@panam.edu	Educational Psychology	Program	Ralph Carlson, JoAnn Burns, Terry Overton, Mary Valerio, Cheryl Fielding	S 38	71%	M.A.	S 6
Trinity University 715 Stadium Drive, Education Department San Antonio, TX 78212-7200 http://www.trinity.edu/departments/education/ma.htm	S: NN	Terry Migliore Ph: 210-999-7595 Fax: 210-999-7592 terry.migliore@trinity.edu	Education	Program	Terry Migliore	S 38	100%	M.A.	S 14
University of Houston - Clear Lake 2700 Bay Area Blvd Houston, TX 77058 http://www.cl.uh.edu/hsh/main/BehSciSchoolPsyc.html	S: NN	Gail Cheramie Ph: 281-283-3392 Fax: 281-283-3397 cheramie@cl.uh.edu	Behavioral Sciences	Program	Gail Cheramie, Emily Sutter	S 35		M.A.	S 12
University of North Texas School Psychology Program, Terrill Hall, Rm 351, Psychology Department Denton, TX 76203 www.psyc.unt.edu		Sander Martin Ph: 940-565-2671 Fax: 940-565-4682 smartin@terrill.unt.edu	Psychology	Gina Miller, Graduate Coordinator, Psychology Dept, Denton, TX 76203	Sander Martin, Vincent Ramospad, David Baker, Raphael Toledo, Persephone Silverthorn, Wayne Hresko	S 15	50%	M.A., M.S.	S 6
University of Texas Department of Educational Psychology, SZB 504 Austin, TX 78712 www.utexas.edu/ or edpsych.edb.utexas.edu	D: NN, APA	Kevin D. Stark Ph: 512-475-7641 Fax: 512-471-4155 kevinstark@mail.utexas.edu	Educational Psychology	website	Kevin Stark, Deborah Tharinger,Cindy Carlson, Peg Semrud-Clikeman, Sheri Robinson, Richard Valencia	D 77	90%	Ph.D.	D 16
University of Texas - Tyler Department of Psychology, 3900 University Blvd Tyler, TX 75799 www.uttyler.edu		Ronald B. Livingston Ph: 903-566-7130 Fax: 903-565-5656 rlivings@mail.uttyl.edu	Psychology	Program	R. Livingston, R.F. McClure, F.G. Mears, S. Jones, C. Grothues, P. Lundberg	S 15	50%	M.S.	

—Utah—									
Brigham Young University 320-A MCKB, BYU Provo, UT 84602 www.byu.edu/cse		Ron Bingham Ph: 801-378-3857 Fax: 801-378-3961 ron_bingham@BYU.edu	Counseling Psychology and Special Education	School of Education, 328 MCKB, Provo, UT 84602-5093	Ron Bingham, Annette Jerome, Melissa Allen, Timothy Smith		52%	M.S.	S 15
University of Utah 1705 E Campus Center Drive, Rm 327 Salt Lake City, UT 84112 www.gse.utah.edu/edpsy/schpsy.htm	D: NN, APA	Elaine Clark Ph: 801-581-7968 Fax: 801-581-5566 clark@gse.utah.edu	Educational Psychology	Program	Elaine Clark, William Jenson, Dan Olympia, Lora Tuesday Heathfield, Janice Pompa	S 8, D 32	25%	M.S., Ph.D.	S 2, D 6
Utah State University Department of Psychology, Utah State University Logan, UT 84322-2810 www.coe.usu.edu/psyc/	S: NN D: APA	Gretchen A. Gimpel Ph: 435-797-0721 Fax: 435-797-1448 ggimpel@coe.usu.edu	Psychology	Program	Gretchen Gimpel, Carolyn Barcus, Donna Gilbertsson	S 23	90%	M.S.	S 8
—Virginia—									
College of William and Mary School of Education, PO Box 8795 Williamsburg, VA 23187-8795 www.wm.edu/education/index.html	S: NN	Sandra Ward Ph: 757-221-2326 Fax: 757-221-2988 scbrub@wm.edu	School Psychology and Counselor Education	Program	Sandra Ward, Lynn Pelco, John Lavach	S 33	50%	M.Ed., Ed.S.	S 14
George Mason University Psychology Department, George Mason University, 4400 University Dr. Fairfax, VA 22030-4444 www.gmu.edu/deparments/psychology/homepage/schlma.html	S: NN	John Blaha Ph: 703-993-1342 x 2 Fax: 703-993-1359 grad_psychology@gmu.edu	Psychology	Admissions	John Blaha, Scott Merydith, Susanne Denham, David Weisman, Virginia Smith, Edythe Wiggs, Jerome Bruns	S 30	30%	M.A.	S 9
James Madison University Dept of Psychology , Johnston Hall - MSC 7401 Harrisonburg, VA 22807 cep.jmu.edu/schoolpsyc	S: NN D: APA	Anthony Paolitto Ph: 540-568-3373 Fax: 540-568-3322 paolitaw@jmu.edu	Psychology	Program	Anthony Paolitto, Patricia Warner, Tammy Gilligan, Ashton Trice	S 18	95%	M.A., Ed.S., Psy.D.	S 10, Psy.D.
Radford University Box 6946 Department of Psychology Radford, VA 24142 www.runet.edu	S: NN	Robert Hiltonsmith Ph: 540-831-5972 Fax: 540-831-6113 bhiltons@radford.edu	Psychology	Program	Robert Hiltonsmith, Dianne Friedman, Joseph Montuori	S 28	75%	Ed.S.	S 8
University of Virginia Curry School of Education, University of Virginia, PO Box 400270 Charlottesville, VA 22904-4270 http://curry.edschool.Virginia.EDU/curry/dept/edhs/	D: NN	Ronald E. Reeve Ph: 434-924-0790 Fax: 434-924-1433 rer5r@virginia.edu	Human Services	Admissions Office	Ronald Reeve, Richard Abidin, Robert Pianta, Ann Loper, Antoinette Thomas	D 43	100%	M.Ed., Ph.D.	D 8

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—WASHINGTON—									
Central Washington University Psychology Department, Central Washington University Ellensburg, WA 98926 http://www.cwu.edu/"%7Epsych/mdegrees.html	S: NN	Gene Johnson Ph: 509-963-2501 Fax: 509-963-2307 johnsong@cwu.edu	Psychology	Graduate Studies & Research, CWU Mail Stop 7510, Ellensburg, WA 98926	Gene Johnson, Lisa Weyandt, Stephanie Stein, Phil Diaz	S 20	30%	M.Ed.	S 9
Eastern Washington University Department of Psychology, 151 Martin Hall, Eastern Washington University Cheney, WA 99004-2423 www.ewu.edu	S: NN Conditional	Mahlon Dalley Ph: 509-359-6147 Fax: 509-359-6325 mdalley@owl.ewu.edu	Psychology Dept and Counseling, Educational, and Developmental Psych Dept	Program	Mahlon Dalley, Gretchen Jefferson, David Hatfield		12%	M.S.	
Seattle Pacific University School of Education, 3307 Third Ave West Seattle, WA 98119-1997 http://www.spu.edu/depts/soe/psych.html		Janine Jones Ph: 206-281-2369 Fax: 206-281-2756 janine@spu.edu	School Counseling and Psychology	Roger Long, Graduate Enrollment and Program Manager	Janine Jones, William Rowley , Christopher Sink	15		Ed.S., Ed.D	6
Seattle University School of Education, Seattle University Seattle, WA 98122-4340 www.seattleu.edu	S: NN	Kristin Guest Ph: 206-296-5776 Fax: 206-296-1982 kguest@seattleu.edu	Counseling and School Psychology	Office of Admissions, Seattle University, Broadway & Madison, Seattle, WA 98122-4340	Kristin Guest, Kay Beisse	S 45	60%	Ed.S.	S 12
University of Washington 322 Miller, Box 353600 Seattle, WA 98195-3600 http://www.educ.washington.edu/COE/ed-psych/index.html	S: NN D: NN, APA	Scott Stage Ph: 206-543-1846 Fax: 206-543-8439 vwb@u.washington.edu	Educational Psychology	Shirley Shimada, 206 Miller Hall, Box 353600, University of Washington, Seattle, WA 98195-3600	Scott Stage, Virginia Berninger, James Mazza	S 22, D 12	76%	M.Ed., Ph.D.	S 8
—WEST VIRGINIA—									
Marshall University Graduate College 100 Angus Peyton Drive S. Charleston, WV 25303-1600 http://www.mugc.edu/Academic/sepd/psych.htm		Stephen L. O'Keefe Ph: 304-746-1932 Fax: 304-746-8951 sokeefe@marshall.edu	School Psychology	Admissions Office, Marshall University Graduate College, South Charleston, WV 25303-1600	Stephen O'Keefe, Fred Krieg, Elizabeth Kelley Boyles	S 40	20%	Ed.S.	S 9
—WISCONSIN—									
University of Wisconsin - Eau Claire School Psychology Program, Dept of Psychology Eau Claire, WI 54702-4004 www.uwec.edu	S: NN	William Frankenberger Ph: 715-836-5733 Fax: 715-836-4892 Frankewr@uwec.edu	Psychology	Program	William Frankenberger, Richard Fuhrer, Kimberly Knesting, Larry Morse, Barbara Lozar	S 24	90%	M.S.Ed., Ed. S.	S 8

University of Wisconsin - La Crosse Psychology Department, 1725 State St La Crosse, WI 54601 www.uwlax.edu	S: NN	Milton Dehn Ph: 608-785-8441 Fax: 608-785-8443 dehn.milt@uwlax.edu	Psychology	School Psychology Program, 341 Graff Main Hall, University of Wisconsin — La Crosse 1725 State St, La Crosse, WI 54601	Milton Dehn, Betty Miller, Robert Dixon	S 28	92%	M.S.Ed., Ed. S.	S 9
University of Wisconsin - Madison 1025 W. Johnson St Madison, WI 53706-1796 www.education.wisc.edu/edpsych/gradprog/schpsych	D: NN, APA	Thomas R. Kratochwill Ph: 608-262-1427 Fax: 608-265-4559 edpsych@facstaff.wisc.edu	Educational Psychology	Barb Lienau, Admissions Secretary	Tomas R. Kratochwill, Jeff Braden, Steve Elliott, Maribeth Gettinger, Julie McGivern, Steve Quintana	D 26	100%	M.S., Ph.D.	D 5
University of Wisconsin - Milwaukee Department of Educational Psychology, PO Box 413 Milwaukee, WI 53201 www.uwm.edu/dept/soe	D: NN, APA	Anne Teeter Ellison Ph: 414-229-4767 Fax: 414-229-4939 teeter@uwm.edu	Educational Psychology	Program	Anne Teeter Ellison, Karen Stoiber, Michael Vanderwood, Dawn Reinemann	S 51, D 20	50%	M.A., Ph.D.	S 9, D 0
University of Wisconsin - River Falls Department of Counseling and School Psychology, 410 S. Third St River Falls, WI 54022 www.uwrf.edu	S: NN	Donald Lee Stovall Ph: 715-425-3889 Fax: 715-425-3242 donald.lee.stovall@uwrf.edu	Counseling and School Psychology	College of Education and Graduate Studies, University of Wisconsin - River Falls, 410 S. Third St, River Falls, WI 54022	Donald L. Stovall, Mike Bonner, John Lecapitaine	S 35	10%	M.S.	S 10
University of Wisconsin - Stout 419 EHS Menomonie, WI 54751 www.uwstout.edu	S: NN	Denise E. Maricle Ph: 715-232-2229 Fax: 715-232-1400 maricled@uwstout.edu	Education, Counseling and School Psychology	Program	Denise E. Maricle, Jacalyn Weissenburger, Scott Orme, Mary Beth Tusing	S 40		M.S., Ed.S.	S 15
University of Wisconsin - Superior McCaskill 111, PO Box 2000 Superior, WI 54880 http://www.uwsuper.edu/tis/gradprog.htm	S: NN Conditional	Suzanne C. Griffith Ph: 715-394-8316 Fax: 715-394-8146 sgriffit@staff.uwsuper.edu	Counseling and Psychological Profession	Graduate Studies Office, Old Main 137, 1800 Grand Avenue, Superior, WI 54880	Suzanne C. Griffith, Rob Dixon, Nancy Minahan	S 16	100%	Ed.S.	S 8
University of Wisconsin - Whitewater Department of Psychology, 800 W. Main St Whitewater, WI 53190 www.uww.edu.psychology/schpsych/school_psychology	S: NN	James Larson Ph: 262-472-5412 Fax: 262-472-1863 larsonj@uwwvax.uww.edu	Psychology	Program	James Larson, Randy Busse	S 45	30%	M.S.Ed., Ed.S.	S 12

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ISBN 0-932955-85-1

1829